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PALESTINE.

DEPARTMENT OF HEALTH

ANNUAL REPORT

FOR THE YEAR

1932.

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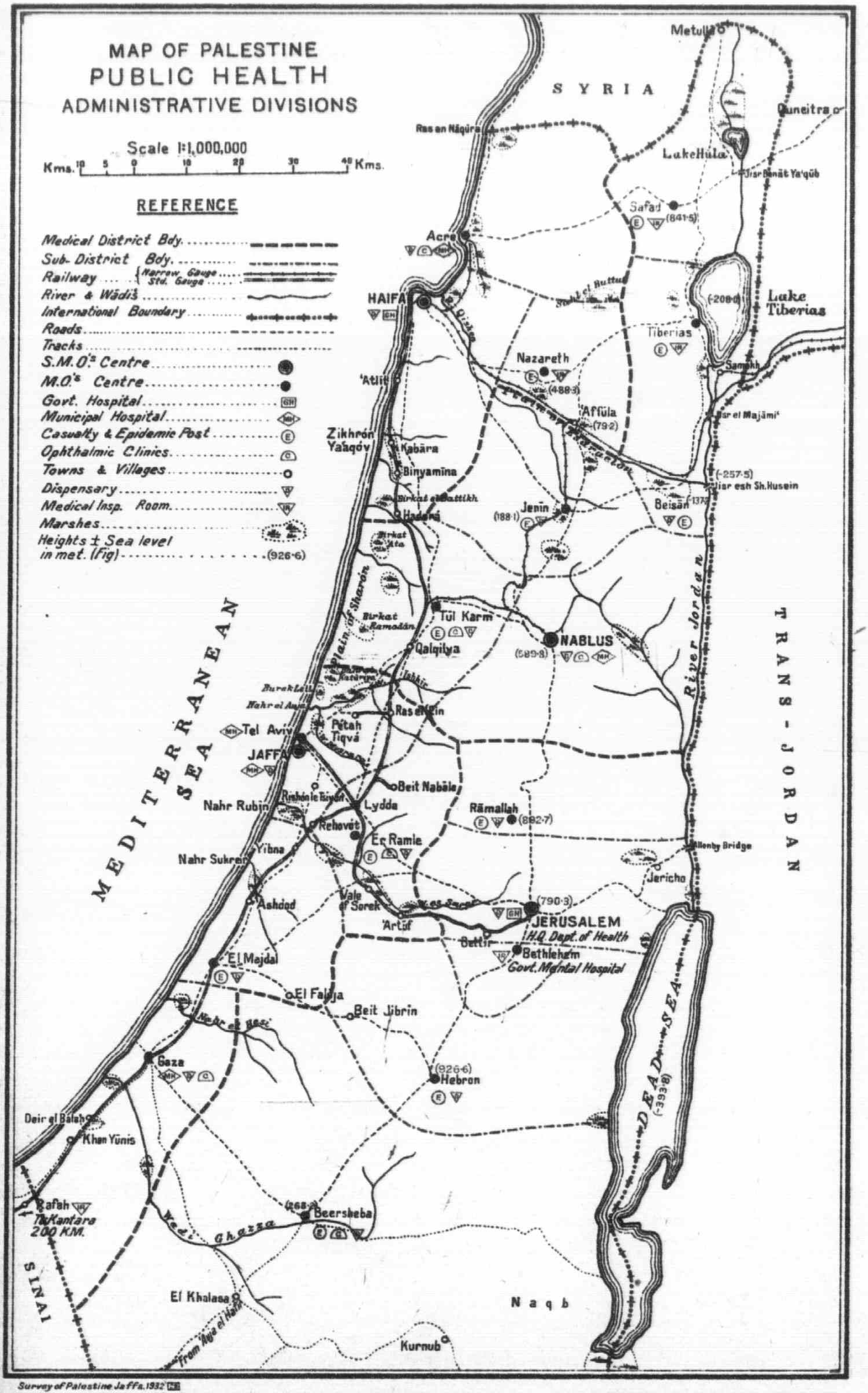

Survey of Palestine Jaffa, 1932

ANNUAL REPORT—1932.

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GOVERNMENT OF PALESTINE.

ANNUAL REPORT
OF THE
DEPARTMENT OF HEALTH
FOR THE YEAR
1932.

I. GENERAL CONSIDERATIONS.

A. ADMINISTRATION.

1. Personnel.

The following posts were included in the Departmental estimates on taking over the analytical service of the Department of Agriculture:—

One Laboratory Attendant Grade II.
One Laboratory Attendant Grade III.
One Laboratory Attendant Grade V.
One Clerk Grade "O".

The establishment of the Department was increased by the inclusion of the following posts:—

One British Nursing Sister for the extension of the Government Hospital, Haifa.
Two British Nursing Sisters for the Government Mental Hospital Number 2, Bethlehem.
Three Staff Nurses for the extension of the Government Hospital, Haifa.
A Staff Nurse for the Government Mental Hospital, Number 2, Bethlehem.
A Laboratory Attendant Grade III for the Bacteriological Laboratory, Jaffa.
A Motor Ambulance Driver for Haifa District.

Vacancies in the Department's establishment were filled by the appointment of:—

Dr. J.M. Shapiro — Medical Officer.
Mr. G.R.P. Witts, Asst. Sanitary Engineer, vice Mr. M.Y. Samaha, resigned.
Miss A.M. Barraball, }
Miss W.M. Farrer, } to fill the new posts of British Nursing Sisters.
Miss A.A. Byrne. }
Miss O.C. Browne, British Nursing Sister, to complete establishment.
Miss M.G. Sutherland, British Nursing Sister, replaced Miss E.N. Bruce, resigned.

Dr. S. Yassin, Medical Officer, vacated his public office with effect from the 9th September, 1932, and was replaced by Dr. Ahmad Sururi.

The following was the distribution of staff at the end of the year :—

Appointment.	Grade.	Name.	Station.
Headquarters and District Administration.			
Director,	"C"	Colonel G.W. Heron, C.B.E., D.S.O.	Jerusalem
Deputy Director (Hospital & Medical Section)	"E"	J.W.P. Harkness	,,
Assistant Director (Laboratory Section)	"F"	G. Stuart, O.B.E.	,,
Senior Medical Officer at H. Qrs. in charge of Sanitary & Epidemic Section	"F"	A. Rankine, M.C.	,,
Senior Medical Officer (Jerusalem District)	"F"	W.P.H. Lightbody	,,
Senior Medical Officer (Jaffa and Gaza Districts)	"F"	V.L. Ferguson	Jaffa
Senior Medical Officer (Haifa and Quarantine)	"F"	J. Macqueen	Haifa
Senior Medical Officer (Samaria and Galilee)	"F"	W.K. Bigger, M.C.	Nablus
Senior Medical Officer (Railways)	"F"	J.H. Thompson	Haifa
Surgeon Specialist	"F"	W.E. Thompson	Jerusalem
Chief Clerk	"K"	C. Morrall	,,
Hospital and Medical Service.			
Asst. Senior Medical Officer (Hospital and Schools)	"K"	D. Bulos, M.B.E.	Haifa
Asst. Senior Medical Officer (Training School)	"K"	H.F. Khalidi	Jerusalem
Medical Officer (Hospital)	"K"	Y. Hajjar	,,
Medical Officer (Mental Hospitals and District)	"K"	M.S. Maloof	Bethlehem
Medical Officer (Hospital and Laboratory)	"K"	R. Reitler	Jaffa
Medical Officer (Casualty Post, Ophthalmic Clinic & Schools)	"K"	S. Bodossian	Ramle
Medical Officer (Hospital, Ophthalmic Clinic & Schools)	"K"	F.I. Haddad	Acre
Medical Officer (Hospital and Schools)	"K"	H.S. Khalidi	Jaffa
Medical Officer (Schools)	"K"	K. Keshishian	,,
Medical Officer (Hospital, Ophthalmic Clinic & Schools)	"K"	N. Hamzeh	Nablus
Medical Officer (Hospital and Special Clinic)	"K"	A.T. Sternberg	Jerusalem
Medical Officer (Ophthalmic Clinic and District)	"K"	I. Itayim	Tulkarem
Medical Officer (Hospital and Ophthalmic Clinic)	"K"	S. Shihab	Gaza
Medical Officer (Hospital and Laboratory)	"K"	A. Malchi	Haifa
Medical Officer (Casualty Post, Ophthalmic Clinic & District)	"K"	S. Saleem, O.B.E.	Beersheba
Medical Officer (Schools)	"K"	M.A. Shukair	Jerusalem
Inspector of Pharmacies	"K"	F.I. Haddad	,,
Matron	Special	Miss E. Dickin	,,
,,	,,	Miss L.J. Hanson	Nablus
,,	,,	Miss E. Davies	Haifa
,,	,,	Miss I.G. Cooper	Jaffa
Matron, Mental Hospital, Number 1	,,	Miss F.I. Channel	Bethlehem
,, ,, ,, , ,, 2	,,	Miss I.E. Cowan	,,
British Nursing Sister	,,	Miss M.E. Lloyd	Jerusalem
,, ,, ,,	,,	Miss L.B. Fielder	,,
,, ,, ,,	,,	Miss I. Freeth	,,
,, ,, ,,	,,	Miss M.G. Sutherland	,,
,, ,, ,,	,,	Miss W.M. Farrer	,,
,, ,, ,, , Mental Hospital, No. 2	,,	Miss A.A. Byrne	Bethlehem
,, ,, ,,	,,	Miss O.C. Browne	Haifa
,, ,, ,,	,,	Miss A.M. Barraball	,,
Superintendent of Midwifery	,,	Miss V.W.E. Rogers	Jerusalem
,, ,, ,,	,,	Miss C.M. Beville	Nablus
Sanitary and Epidemic Section.			
Sanitary Engineer	"H"	L. Cantor	Jerusalem
Asst. Sanitary Engineer	"K"	G.R.P. Witts	,,
Asst. Senior Medical Officer	"K"	R. Oplatka, M.B.E.	Tel-Aviv
,, ,, ,, ,,	"K"	H. Abu Rahmeh, M.B.E.*	Amman
,, ,, ,, ,,	"K"	M. Shishmanoglou	Jaffa
Medical Officer	"K"	J. Tucktuck	Haifa
,, ,,	"K"	Z. Haddad, M.B.E.	Nablus
,, ,,	"K"	F.K. Abla	Majdal
,, ,,	"K"	A. Abdel Al, O.B.E.	Hebron

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* Seconded as Director of Public Health, Transjordan.

Appointment.	Grade.	Name.	Station
Medical Officer	"K"	A. Abu Ghazaleh	Jenin
,, ,,	"K"	G.E. Ayoub	Jaffa
,, ,,	"K"	I. Haurani	Gaza
,, ,,	"K"	K. Eid	Ramallah
,, ,,	"K"	Taher El Khatib	Nablus
,, ,,	"K"	M.K. Mishalany	Nazareth
,, ,,	"K"	A.A. Shehadeh	Haifa
,, ,,	"K"	F. Shubeita	Jaffa
,, ,,	"K"	E. Sukkarieh	Safad
,, ,,	"K"	A. Haddad	Ramle
,, ,,	"K"	A.M. Shehadeh	Jerusalem
,, ,,	"K"	Ahmad A. Sururi	,,
,, ,,	"K"	H.M. Torian	Tiberias
,, ,,	"K"	A.K. Khartabil	Nablus
,, ,,	"K"	J.M. Shapiro	Haifa
Quarantine Section.			
Asst. Senior Medical Officer	"K"	Y. Chami, M.B.E.	Jaffa
Medical Officer	"K"	B. Franco	Haifa
Laboratory Section.			
Government Analyst	"G"	G.W. Baker	Jerusalem
Bacteriologist	"K"	K.S. Krikorian	,,
Asst. Bacteriologist	"K"	M.S. Dabbagh	,,
Asst. Analyst	"K"	W.J. Itayim	,,

Training of Personnel.

Dr. W.P.H. Lightbody completed the course and obtained the Diploma of Public Health (Glasgow University)

Study leave was granted to Dr. J. Macqueen to allow him to take the second part of the Diploma in Public Health.

During the year 5 nurses of the Department completed their training and qualified as graduate nurses.

10 graduate nurses and 7 pupil midwives were trained in the Government Maternity Centre and awarded the Certificate of Midwifery.

Ten ophthalmic and school nurses attended one month's refresher course of ophthalmic nursing at the hospital of the Order of St. John in Jerusalem.

First Aid.

The following personnel were trained and examined in First Aid, and awarded the certificate of the St. John Ambulance Association:—

Department of Health Personnel	6
Police	165
Others	33

Training in Sanitation.

Mr. G.R.P. Witts, Asst. Sanitary Engineer and Mr. J. Moussa, Sanitary Sub-Inspector, proceeded to Cyprus for training for the Sanitary Inspectors' examination, held at Nicosia, under the auspices of the Royal Sanitary Institute. Both candidates successfully passed the examination and were awarded certificates as Sanitary Inspectors of the Royal Sanitary Institute. Mr. Witts has been elected an Associate of the Royal Sanitary Institute.

During the year a Departmental elementary course of instruction in sanitation was held. The course was attended by 17, of whom 12 successfully passed the examinations in the various subjects.

2. Ordinances, Regulations etc.

The following ordinances and regulations affecting the Department have been enacted during the year:—

Official Gazette		Subject
No.	Date	
298	**1.1.32**	**Customs Duties Exemption Ordinance 1924 — addition of Chlorine to Schedule.**
299	**16.1.32**	**Diseases of Animals Ordinance 1926 — Rabies (Amendment Number 2) Rules, 1931. Placing of dogs, cats, monkeys etc. in kennels for observation.**

299	16.1.32	Fees for Bacteriological and Chemical Examinations in the Department of Health Laboratories. Amendment to Scale of Charges.
„	„	Tel-Aviv Local Council Bye-Law regarding the opening or voiding of cess-pits.
300	1.2.32	Regulations under the Trades and Industries Ordinance 1927. Scale of Fees for Licensing of Cattle Sheds.
306	1.5.32	Rabies Rules, 1932, (Amendment Number 1) under Diseases of Animals Ordinance; dog, cat or monkey may be destroyed if of savage disposition or dangerous to public health.
307	16.5.32	Regulations for Reformatory Schools under the Prisons Ordinance 1921. Duties of Medical Officer in connection with inmates.
308	1.6.32	Quarantine Ordinance 1922; Payment of Overtime Fees to Quarantine Staff.
311	16.7.32	Customs Ordinance 1929. Order Prohibiting Importation of Butter, samneh or artificial butter (margarine) to Palestine which does not conform to certain specifications.
321	13.10.32	Notice under Dangerous Drugs Ordinance 1925-28 declaring acetyldihydrocodeinone to be a dangerous drug.
324	3.11.32	Customs Duties Exemption Ordinance 1924 — Additions to Schedule — Chlorinating Apparatus for Municipal Water Supplies.
331	15.12.32	Customs Duties Exemption Ordinance 1924 — Additions to Schedule of Exemption — Sodium Cyanide, Sodium Bisulphate.
334	29.12.32	Dangerous Drugs (Amendment) Ordinance, Number 49, of 1932.

3. Revenue and Expenditure.

The following is a summary of the estimates and expenditure for the financial year 1932/33. The comparative total figures of estimates of expenditure for previous years are given below:—

Revenue.		Expenditure.	
1.4.32 to	A. Personal Emoluments	£P. 81,050	
31.3.33 £P. 10,330	B. Other Charges	£P. 33,951	£P. 115,001

Detail of Other Charges.

Transport and Travelling	6,144
Railway Fares and Freight	1,500
Lighting and Heating	1,625
Drugs, Dressings and Instruments	4,950
Vaccine and Sera	750
Equipment and Stores	2,200
Disinfectants and Maintenance of Disinfecting Machines	1,600
Hospital Diets	8,200
Clothing	1,525
Epidemic Outbreaks	200
Antimalaria Measures	500
Medical Attendance in Private Hospitals	800
Relief	52
Contribution to Tropical Diseases Bureau	60
Contribution to Seamen's Hospital	11
Contribution to Colonial Advisory Medical Committee	27
Contribution to Permanent Commission of the Office International d'Hygiene Publique	30
Contribution to Ross Institute, London	25
Fees for Notification of Births and Deaths in Villages	500
Medical Library	80
Allowances to Officers attending Courses of Instruction	250
Telegrams, Telephones and Postage	1,300
Honorarium to Medical Officer of Sinai Military Railways	50
Contingencies	100

Special Expenditure.

Typewriters	50
Motor Ambulance	448
Furniture and Equipment — Haifa Hospital	974
	£P. 33,951

Revenue.			Expenditure.		
1932 (1st Qtr.) £P.	2,488	A.	Personal Emoluments	£P. 19,785	
		B.	Other Charges	£P. 7,591	£P. 27,376
1931	9,950	A.	Personal Emoluments	£P. 79,140	
		B.	Other Charges	£P. 32,201	£P. 111,341
1930	9,860	A.	Personal Emoluments	£P. 76,143	
		B.	Other Charges	£P. 32,408	£P. 108,551
1929	10,350	A.	Personal Emoluments	£P. 73,694	
		B.	Other Charges	£P. 29,885	£P. 103,579
1928	10,480	A.	Personal Emoluments	£P. 74,080	
		B.	Other Charges	£P. 31,380	£P. 105,460
1927 (9 months) £E.	7,320	A.	Personal Emoluments	£E. 52,948	
		C.	Other Charges	£E. 24,955	£E. 77,903
1926-27	13,830	A.	Personal Emoluments	£E. 68,987	
		B.	Other Charges	£E. 28,692	£E. 97,679
1925-26	9,050	A.	Personal Emoluments	£E. 63,140	
		B.	Other Charges	£E. 21,341	£E. 84,481
1924-25	9,570	A.	Personal Emoluments	£E. 61,791	
		B.	Other Charges	£E. 20,632	£E. 82,423
1923-24	11,590	A.	Personal Emoluments	£E. 64,226	
		B.	Other Charges	£E. 29,032	£E. 93,258
1922-23	8,720	A.	Personal Emoluments	£E. 72,508	
		B.	Other Charges	£E. 32,860	£E. 105,368
1921-22	8,158	A.	Personal Emoluments	£E. 70,914	
		B.	Other Charges	£E. 82,795	
				£E. 153,709	
			Less estimated cost of Railway Medical Service	£E. 10,824	£E. 142,885

The Palestine Government estimates of revenue and expenditure for the financial year under review were as follows :—

Revenue	£P. 2,442,083	Expenditure	£P. 2,403,235

B. FINANCE.

The estimated expenditure for 1932 was approximately £P. 3660 in excess of that of 1931. Of this amount, £P. 1425 was accounted for by normal increments of salary, and £P. 1150 by special expenditure.

The only expansion of existing services, recorded as in progress in the report of 1931, was that of the Mental Hospital which took effect at the end of the year. A temporary building at Bethlehem was adapted for the accommodation of 50 patients in order to relieve the Jewish Ezrath Nashim Society of 30 patients which they were no longer able to support, and to provide for 20 additional patients out of the 116 severe cases on the waiting list. Meanwhile out of funds voted for the Bethlehem expansion, the cost of food and staff for the 30 patients was defrayed by Government in view of the financial difficulties of the Society.

The delay in the alteration in an adjacent building to allow of the expansion of Haifa Government Hospital by 50 beds necessitated the temporary establishment of a 30 bedded reserve in a hired building in order to meet the situation resulting from the closure of the Kupat Cholim Hospital in the Emek on reduction in funds voted to the organization by the Executive of the Jewish Agency. The cost of this temporary establishment was met from savings on the credits voted for the permanent extension of Haifa Government Hospital.

The voluntary and charitable organizations continue to feel the pinch of the prevailing financial depression in Europe and America, but in view of the comparative prosperity in Palestine there was no material increase in the sick rate, and the people were in a position as a rule to pay hospital treatment fees. If that had not been the case, several hospitals would have been compelled to curtail their valuable work.

In spite of the large number of voluntary hospitals and clinics, the number of doctors applying for licences to practice does not diminish, and it would appear that the majority are able to make a bare living on the earnings from their medical practices, while several are in flourishing circumstances.

The Municipalities have in certain cases shown some small advance in public services. Certain of the larger Municipalities might with advantage review their expenditure on overhead charges in order to allow expansion of sanitary and maintenance services. Water supplies at Gaza and at Jaffa were improved, and in Jerusalem owing to the acute shortage after a poor rainfall, an additional temporary expedient to relieve the situation was put into effect at a cost of £P. 8300 and doubled the meagre supply already obtained from the Wady Farah.

It is unfortunate that credits are still not available for permanent and adequate water schemes for Haifa, Jerusalem and Jaffa. Each of these schemes would reduce the sick rate for enteric and other diseases and infant mortality, and would in other respects improve the health of the people, while bringing in a revenue to the Municipalities.

A large number of smaller Municipalities and Colonies have already improved their supplies and it is remarkable how many villages have taken the Department's advice, and found money to improve and conserve their scanty supplies. Many others have small schemes in view but insufficient money to carry them out.

Drainage for which Municipal credits are more difficult to obtain, has become a necessity in many quarters of the larger towns. In Jaffa the situation has been tackled well, and in Haifa great strides have been made by the Municipal and Health Authorities, from credits supplied by property owners.

In Jerusalem, following on the grant of £P. 40,000, progress has been made on the main sewer in the Jaffa Road — Mamilla Section of the main drainage scheme. The main sewer will relieve the situation in that area only, but since the grant did not allow of lateral sewers construction of these will be necessary by means of credits supplied by owners of property. Where no credits are forthcoming, there will be no lateral sewers, and connections will only be compulsory under the Drainage Ordinance in the cases of properties within 100 metres of the Municipal sewer. This is the unsatisfactory feature of the project.

Credits are still required to complete the sewerage of other sections of Jerusalem, more especially to lay sewers from the N. W. drainage temporary outfall, and from the old city sewer, to join the general outfall below Silwan.

In colonies, there has been an advance in permanent house construction, and in many villages the fellaheen in spite of poor crops and apparent depression continue to construct masonry houses. The rapid increase of population no doubt necessitates extension of housing.

In towns, house construction, usually on good lines, has advanced apace both in Arab and Jewish quarters. The Arab tends to put his savings into house property.

The voluntary and charitable hospitals continue to relieve Government of the necessity of providing more extensive hospital accommodation, but as the population increases, Government must inevitably face periodical expansion of their hospital provision.

The provision for infectious disease is still inadequate but it is hoped that credits may be made available next year for expansion in this direction, and for the preparation of a scheme for the treatment of tuberculosis.

C. PUBLIC HEALTH.

1. General Considerations.

The vital statistics accord with the variations in population figures resulting from the Census of 1931. The death rate at 22.26 was a little higher than that of the adjusted figure of 22.09 for 1931. There was no material change in the incidence of disease, nor was there any notable epidemic.

The infant mortality rate under 1 year per 1000 births was 153 compared with 170 for 1931. The Moslem rate was 164, Christian 141 and Jewish 85. It will be long before the former can be reduced to European rates. So much depends on improvement of sanitary conditions, water supplies and housing conditions in villages, as well as on the gradual education of the mothers in feeding and tending their babies.

It is, however, encouraging to find that in the larger towns, where the people are better educated and where infant welfare clinics are as a rule already established, the infant mortality figure was 142 (Moslems 169.2, Christians 126.6, Jews 93.5) a rate which compares favourably with that of 150 in England in 1900.

The birth-rates, now adjusted to the new census population figures, are not quite so formidable as they have appeared in the past on the old population basis, but a rate of 44.1 per 1000 (Moslems 48.9, Christians 36.4, Jews 29.2), compared to the adjusted figure of 48.07 for 1931, is still considerable, and gives a natural increase of the population of 21.87.

There is a vast amount of disease amongst the rural Arab population in certain areas and in the old slum areas of towns.

The Jewish population, most of them being young immigrants, are healthy as a whole. The large number of attendances at clinics and admissions to hospitals would appear to indicate an excessive amount of sickness. This is, however, not the case, but the fact of those attendances may be reflected in their comparative good health. The Jews suffer considerably more from the enteric fevers than the Arabs, and from mental disease, in proportion to their respective populations.

A short preliminary survey of tuberculosis elicited the fact that the ravages of this disease were considerably greater in Arab villages and towns than one had been led to expect from hospital and outpatient returns. There is a certain reluctance, almost a superstition, on the part of those affected to attend for medical treatment, which, it must be admitted, has not as yet been provided for them by the Government nor by voluntary organizations. Amongst Jews, it is an equally serious problem but a small provision has been made for them by the Hadassah Medical Organization.

With the remarkable natural increase in Arab population of recent years, the poverty in villages is becoming more serious. There are more mouths to feed, the crops have been poor for some years, there is no army conscription to take away the youths and little new land to be brought into cultivation. The Department was able to get free labour for antimalarial works, more especially those works that benefit either the pockets or the health of the villagers, but there is increased neglect in the clothing and feeding of their children, in repairing of their water cisterns and supplies, and in most districts it became more difficult to extract even the minimum dispensary fees from village patients. We are in fact treating more and more patients free in dispensaries and in Government Hospitals, and I should like to see still more free medical treatment extended to the rural Arab population to avoid further deterioration of their general condition of health, and to minimize the risk of epidemics.

The chief Jewish colonies do not appear to be suffering in this respect. There are some that are obviously in difficult condition, and they would be actually worse if not assisted from outside sources. Most Jewish in-patients in hospitals are able to pay fees, and a large proportion of their rural working population contribute to the Kupat Cholim Health Insurance Fund. There is more money also for colony development of water supplies and sanitation, though much of the latter in the newer colonies is very unsatisfactory.

Schools continued to receive our close attention and the interest taken by the Education Department's officers and teachers was largely responsible for the success that we attained. The general cleanliness of the children in Government schools and their healthy condition is striking amongst a people to whom cleanliness is not next to godliness.

Active trachoma and acute conjunctivitis is controllable in schools but a very large proportion of the children suffer from a chronic 3rd stage trachoma and require constant attention.

The Government schools are still situated for the most part in unsatisfactory buildings and their sanitation is not a good example to the pupils. Village schools built on simple lines are usually less crowded and more sanitary.

Village sanitation is difficult without Local Council organization, which is rare. There is no one responsible to clean the village except the householder who generally neglects to clean his frontage unless compelled at intervals by the Medical Officer. Promiscuous defaecation is the rule and garbage is thrown to any convenient spot. The result naturally makes for flies, enteric, dysentery, infantile diarrhoea, acute conjunctivitis and, in the Jaffa plains, hookworm.

Many of the colonies are equally bad, and though there are committees, not Local Councils, there is usually insufficient revenue to pay for scavengers. Water supplies on the other hand are nearly always satisfactorily developed and the colony clinic or nurse is at hand to counteract the bad effects of an indifferent sanitation.

Some 528 village latrines of the bored hole type were put down by the Department in hookworm affected areas near Jaffa and in some villages 95% of the houses were so installed. The people subscribed the cost of materials at 400 mils.

Hospital beds for general diseases proved sufficient for the need of the population in Jerusalem and the Southern District, but owing to the delay in the extension by 50 beds of Haifa Government Hospital, the situation was difficult during the enteric season, but all cases of this disease were accommodated, sometimes at the expense of other cases that might have been admitted.

There was still a shortage of beds in the Eastern Galilee which had to rely almost entirely on the Scottish Mission Hospital at Tiberias. There are proposals to improve the situation next year in this area.

Infectious hospital accommodation continues to be quite inadequate. For Jerusalem town and the district which it serves, with a population of 266,562, there are only 11 beds for adults. In the Nablus area, only 4 beds are available for a population of 237,256, while in Jaffa and district with a population of 257,273, there are 25 beds. In Haifa and district there are 55 beds for a population of 169,206.

In the latter two places, we have at times to utilize the Quarantine Lazarets.

Voluntary hospitals, with the best will in the world, are unable to assist us in the accommodation of infectious diseases other than in accommodating a few of the enteric and dysentery cases.

At Hebron, the hospital of the Jerusalem and the East Mission continued to relieve Government of providing hospital accommodation in a district in which the people are very poor and are riddled with diseases such as trachoma, conjunctivitis, syphilis, tuberculosis.

At Gaza and at Jaffa and at Nablus, the C.M.S. hospitals supplemented the beds provided at the Municipal hospitals, which are run conjointly by Government and Municipality, and did very valuable work.

The Edinburgh Medical Mission hospital at Nazareth provided very satisfactorily for that town and district.

The Government's cooperation with the ophthalmic hospital of the Order of St. John continued actively, and the Department's ophthalmic clinics in 7 places attended to some 23,531 new patients during the year, and 7,528 school children received treatment at these clinics or from the School Medical Officer.

The Census of 1931 revealed the true situation as regards blindness in the Southern District, a situation which we have known since 1920 was very serious, and which we have attempted to combat by means first of a travelling ophthalmic hospital, and subsequently by ophthalmic clinics.

Dr. Strathearn, Honorary Ophthalmic Consulting Surgeon to the Government, spent a month in the villages and corroborated the findings of the Census. He subsequently reported on the situation and put forward a scheme for a campaign against the devastating village epidemics of acute conjunctivitis which are the origin of the large amount of blindness. This scheme will be put into effect in the summer of 1933. Its success depends on bringing opportunities for treatment promptly to the village when an epidemic of acute conjunctivitis commences, and in subsequently dealing, surgically, with those complications which lead to blindness.

The Hadassah Medical Organization was compelled, owing to diminishing funds, to curtail some of its activities, but has succeeded satisfactorily in perpetuating, on a less expensive scale, the services which it commenced, by handing over a considerable part of its financial obligations to the Jewish communities. Thus, in Haifa, a smaller hospital will be chiefly financed by the community, and the Government is expanding its accommodation to meet certain of the hospital services now curtailed. At Tel Aviv the Local Council is taking a larger share in the financing of the Township hospital assisted by a grant-in-aid from Government. In the districts, the Jewish colonists are subscribing to the Rural Sick Benefit Fund which pays for medical services previously supplied by Hadassah.

The Kupat Cholim, which is a voluntary health insurance organization with 20,000 members from amongst Jewish workmen, has a revenue of some £P. 57,000 and provides its members with hospital accommodation, rural clinics and nursing and other sick benefits. It is run on good lines and provides its members with an excellent medical service, economically conducted.

It will be seen, therefore, that, at any rate, in matters of sickness, health insurance etc., the Jewish workmen do not rely on charity from abroad, but have themselves organized a service for which they themselves pay.

Other voluntary hospitals that assisted in providing for the sick of the various communities were the Italian, French and German hospitals, providing accommodation chiefly for Christian Arabs; the Shaare Zedek and Bicur Cholim for Jews; while the English hospital of the Church Mission to Jews continued its very useful work amongst the same community. Dr. Orr-Ewing, who rendered such valuable service to the Government, gave up his charge of the English hospital during the year and will be much missed.

The Moravian Mission continued its useful service to lepers.

Voluntary hospitals tend to concentrate chiefly in the more populous centres with special religious associations, and to confine themselves to hospital treatment of diseases of a general nature or to surgery. There is, therefore, a lack of provision for special diseases such as tuberculosis, and for incurables.

2. Communicable Diseases.

There was not any serious epidemic during the year. The incidence of enteric fever showed an increase, from 905 to 1215 cases. A few sharp outbreaks occurred in Arab villages, but the incidence otherwise was chiefly amongst Jews and Europeans. Measles was, as usual, responsible for much sickness and considerable mortality in Arab villages.

Considerable preliminary work was done in those villages near Jaffa showing a high infectivity from hookworm. Dr. Scott of the Rockefeller Foundation came from Egypt for 6 weeks and carried out a survey which indicated that the villages already incriminated were seriously infected in some instances and that the further extension of the disease might be economically serious to the Arab workers in the orange grove districts.

A commencement was made with the advice of Mr. Carter of the Rockefeller Foundation, who is in charge of the campaign against hookworm and bilharzia in Egypt, in the establishment of bored hole latrines. One gang working for about 9 months put down 528 latrines, and in several instances established latrines in 90 to 95% of all houses in a village. The people paid for the material costing 400 mils for each installation. As soon as the majority of the houses in a village were provided with latrines, oil of chenopodium treatment was started. It is proposed to continue the installation of latrines in these infected villages next year but with a larger contribution by Government and less by the people. It is only in the more prosperous orange grove areas that the people can afford to advance 400 mils, and it is desirable to gradually extend the work to all other villages and colonies as a sanitary measure with the object of diminishing the incidence, not only of hookworm disease, but of infantile diarrhoea, typhoid, dysentery and acute conjunctivitis.

With improved sanitation and development of better and purer water supplies, the incidence of disease should rapidly diminish. The completion of the programme, however, will take some years and involve considerable expenditure.

The comparatively normal incidence of enteric fever was a matter for satisfaction in view of the serious water shortage in the towns and villages in the hill country, and of the continued unsatisfactory sources of supply from improperly protected wells in Haifa and Jaffa. Although the rural sources of supply in cisterns is almost always from a soiled catchment area, there is a greater opportunity for faecal contamination from cesspits and percolating pits in towns, as our records clearly show.

The influence of water supply on the incidence of dysentery was again demonstrated in the case of Tiberias in which town before the installation of a public chlorinated water supply, dysentery was one of the commonest diseases. Only 9 cases were notified during this year as compared with 380 in 1927. In Safad on the other hand, with its very scanty water supply and its increasingly dilapidated drains, the disease is becoming yearly more common.

Very little work on tuberculosis was possible on account of reduction in staff. Individual work by Medical Officers in the Southern District showed that the disease is as prevalent as it is in the North where a preliminary survey was carried out. The incidence of the disease is far greater than that recorded in our statistics of cases reported.

In both Syria and Egypt, there were sharp epidemics of smallpox, but not a single case occurred in Palestine.

Malaria was not unduly prevalent in the rural districts while in towns the incidence was negligible. It must be understood, however, that in all towns routine antimalarial work has to continue unabated and every cistern or water collection is carefully dealt with each fortnight.

The occurrence of new cases in Jerusalem in 1931 where no cases had occurred for years, indicated clearly that any neglect by, or reduction in the number of, the inspectors or oilers at once led to the development of cases.

The small rainfall of the past two winters very greatly reduced the incidence of malaria in most of the rural areas, but at the same time reduced the standard of living of the people and increased the incidence of intestinal disease owing to the diminution in good water supplies.

Endemic syphilis in the Hebron district continued to be a difficult problem. The disease is so widespread that reinfection, by other than venereal channels, and recrudescence is difficult to prevent unless a much larger organization to deal with the disease is made possible. The statistical incidence recorded of cases reporting for treatment is in no way indicative of the actual incidence.

The matter of provision of additional hospital facilities for enteric and other communicable diseases in Eastern Galilee was again under consideration, but in the absence of epidemic conditions, it was not found necessary to take any emergency measures, pending the permanent establishment of a hospital for communicable and infectious diseases in the area as advocated by the Department.

D. INDUSTRIAL CONDITIONS.

Considerable progress was made in the control of the conditions under which trades and industries dealing with foods and beverages were conducted.

The owners of establishments in the larger towns as well as their clientele appear to appreciate sanitary improvement, and in new quarters, there was no difficulty in obtaining a comparatively high standard of shop or factory. It is, however, in the older quarters of the towns where improvement is slow, while the milk trade as a whole yet lacks control, chiefly on account of the fact that in Arab centres there is no organised marketing and in Jewish centres farm cowsheds and dairies are indifferent, though distribution is good.

The improvement of the sanitary installations in new houses was again marked. English standard of household bath, latrine, and kitchen installations is the rule in new buildings in all towns, and the house drainage whether to septic tank and percolating pit, or to subsidiary drainage lines, is remarkably good. The building permit system, under the Town Planning Ordinance, and the supervision exercised by the Sanitary Surveyors in the larger towns, and the Medical Officers in the small, is responsible for this satisfactory development. The Department regards a good household sanitary installation as an educational factor of value.

House building in towns and in villages developed again to an unbelievable extent. New quarters in the vicinity of towns have sprung up. Nablus, Ramleh, Tiberias, have doubled in area and the building is generally good. Jewish colonies have expanded, and many of the wooden huts have been replaced by masonry. Shops, again, multiplied and appear to be out of all proportion to requirements.

The housing situation for new immigrants and for Arab workmen continues to present a serious problem especially at Haifa. There are more than 1700 temporary huts of the most dilapidated description occupied in various open spaces within the town. The majority, and these the worst, are constructed of old rusty petroleum tins, and are occupied by Arab workmen, while new immigrants erect and occupy equally insanitary wooden shacks in other quarters. Powers exist to evict these squatters, but there is no alternative accommodation for them and eviction is, therefore, difficult.

The Department and the Central Town Planning Commission have strongly advocated the purchase of an area outside the town, and the erection thereon by the Municipality of simple but sanitary dwellings to be leased to workmen.

Apart from the general soiling of the town that goes on, it is inevitable that with the opening up of the port of Haifa and the mooring of ships to the quays, plague rats from neighbouring infected ports such as Alexandria, Beyrouth, etc. will gain entrance to the town, and then the situation of those living in shacks will be dangerous.

I consider this one of the most pressing health problems of the country to be faced by Government and Local Authorities.

E. MUNICIPAL SANITARY SERVICES.

There was a tendency in several of the larger Municipalities including Jerusalem to limit the expenditure on sanitary services to the minimum of necessity.

The considerable expansion of the towns of Jerusalem, Jaffa and Haifa in the past few years has not been accompanied by an equal increase in the funds voted for sanitary services with the result that scavenging and cleansing services have been unable to keep pace with the requirements. This fact is particularly noticeable in side streets and in suburbs of towns where the poor condition of road surfaces make the situation still more unsatisfactory.

In the absence of credits for main sewerage schemes, drainage of a minor but most useful kind was installed in several quarters in Haifa and Jaffa at the expense of the Municipality and in some cases of the owners of property.

It is, however, the absence of main collectors that complicates the drainage situation especially at Haifa.

A large programme of sewerage was drawn up by Jaffa Municipality for 1933, and provided for outfalls that will serve both Jaffa and Tel Aviv. I trust that credits will be forthcoming from Government to assist in these projects so valuable from the point of view of health in two adjacent towns where the incidence of enteric fever and of dysentery is steadily rising.

In Jerusalem, connection to the N.W. drainage system continued, and the laying of a main sewer in the Jaffa Road — Mamilla — Valley of Hinnon sector was commenced and will relieve the highly insanitary situation that pre-existed in this area. Laterals must be installed at the expense of private owners who are quite ready to pay if only to avoid the high charges made for voiding of cesspits. The principle, however, is wrong, and the future adjustment of drainage tax will be difficult.

The water situation in the larger towns remained stationary, except that in Jerusalem, another temporary expedient was made, during the critical period of water shortage in September, to increase the supply by pumping a portion of the Wady Kelt water through the Ain Farah system.

In Haifa no choice was made as between the various projects put forward during the past few years. I consider that the high contamination of nearly all the supplies in this town, with its rapidly expanding population and its new harbour, warrants the very early development of an adequate and pure water supply. There is no safe source of water supply to shipping, and the problem of watering the large harbour reclamation area has not yet been faced.

In Jaffa, there was a small but determined effort to increase the Municipal supply to a larger area. It is inadequate at present for the needs of the population, but a successful new bore in the Bassa, and the project for a service reservoir will go far towards solving the problem if it can be put into effect.

The influence of these questionable supplies on the increasing incidence of enteric fever in these towns is evident. We cannot reduce that incidence until water and sewerage improve.

Refuse disposal has much improved in Jerusalem and Haifa, but in Jaffa and Tel Aviv is most unsatisfactory and a subject of frequent representation by the Department.

I have again to refer to the remissness by Municipalities as a whole in providing gardens and open spaces for the healthy recreation of the people. Jaffa, Tel Aviv and some of the smaller towns have made very good provision in this respect but Jerusalem and Haifa have made no effort at all to open up their overcrowded towns, nor can owners of property be prevailed upon to provide open spaces, or to exceed the statutory limits of unbuilt-upon area around their houses.

The results of the antimalaria work in Municipal areas controlled by the Department of Health, with the assistance of Municipal labour, has been very satisfactory. Not a single case of malaria occurred in Jerusalem, Jaffa, or Tel Aviv as a result of local infection.

In Haifa the number of cases was 6 and in the Kishon area the anopheles "catch" fell from 2877 to 25 as a result of the completion by the Government of the Kishon antimalaria scheme.

This situation is not attained without strict supervision of the routine work of antimalaria gangs.

F. TOWN PLANNING.

Sixty-nine Town Planning schemes were dealt with by the Central Town Planning Commission, in addition to new bye-laws and amendments to previously approved schemes.

The Jerusalem Town Planning Commission submitted twenty-seven schemes, twelve of which were finally approved. Eleven schemes were prepared by the City Engineer in consultation with the Adviser of the Commission. These schemes were detailed developments of previously approved outline schemes drawn up by the Adviser. The remaining schemes were parcellation schemes submitted by the Municipality on behalf of private owners. Detailed schemes now cover most of the built up area of the city and areas ripe for development, excluding areas for reconstruction and the Old City. The most important schemes were, the Central Area Town Planning Scheme; West Central town planning scheme; Karem Quarter Scheme; Light Industrial Areas; Areas under Modified Control and Commercial Frontage Zones. The schedule of trades and industries of all zones was brought up-to-date.

Jaffa Town Planning Commission submitted nineteen schemes, fifteen of which were for the Township of Tel Aviv. Fourteen schemes were finally approved. The outline Town Planning Scheme for Jaffa with town planning regulations was prepared by the Adviser and finally approved. The schemes for Tel Aviv were detailed developments of the previously approved Geddes scheme; zoning schemes for all parts of the existing town and private parcellation schemes.

Haifa Town Planning Commission, submitted sixteen schemes which included an outline scheme for the whole town planning area, which was provisionally approved. A scheme for the Haifa harbour reclamation area was drawn up by a special sub-committee appointed by the Commission and the Department of Public Works. Two parts of this scheme were finally approved.

Tiberias Town Planning Commission submitted four schemes; The Old City scheme, prepared by the Adviser, the Kiriat Samuel scheme and the Labour Quarter scheme, all of which were finally approved, and the Job-el-ban scheme, a detailed parcellation scheme.

A new suburb for Nablus and the town planning boundary for Bethlehem were considered.

Recommendations were made to several Local Commissions to provide, in town planning schemes put forward, open spaces and parks. In few cases was this done, on account of the lack of Municipal funds to purchase areas of land for public open spaces, and the unwillingness of private owners of property to allocate private open spaces to improve the amenities of the scheme proposed. It is a matter of considerable concern to the Central Town Planning Commission to find that several of the larger and developing towns such as Jerusalem and Haifa are becoming completely built up and bereft of those open spaces and gardens which are such a feature of modern European towns and are so necessary in a hot climate for the health and recreation of the people.

II. VITAL STATISTICS AND EPIDEMIC DISEASE.

1. Vital Statistics.

(a) General:

The population of the country as recorded by the census of 18th November, 1931, is as follows:—

Moslems.	Jews.	Christians.	Others	Totals.
759,712	174,610	91,398	10,101	1,035,821

Included in these figures is the Bedouin population estimated at 66,553.

On the basis of these figures, an estimate of the midyear population at 30th June, 1932, has been calculated. From this estimate, the numbers of His Majesty's Forces in Palestine and the population of the Bedouin tribes are excluded, as civil registration of vital occurrences is not applicable to the Forces and is only possible of very imperfect application in the case of nomadic tribes.

ESTIMATE OF POPULATION ON JUNE 30th, 1932.

	Christians.	Moslems.	Jews.	Others.	Totals.
Census of November, 1931	91398	759712	174610	10101	1035821
Deduct Nomadic Bedu Tribes		66553			66553
	91398	693159	174610	10101	969268
Deduct His Majesty's Forces	2491	12	4		2507
	88907	693147	174606	10101	966761
Add Natural Increase Dec. 1931 to 30-6-32	1240	11456	2352	180	15228
	90147	704603	176958	10281	981989
Add Excess of Migration „ „ „ „	484	21	3835		4340
Estimate as at 30th June, 1932	90631	704624	180793	10281	986329

A classification of the estimated population by sex is as follows:—

ESTIMATE OF POPULATION ON JUNE 30th, 1932.

	Jews.		Non-Jews.		Totals.		Totals
	Males.	Females.	Males.	Females.	Males.	Females.	
Census of November, 1931	88100	86510	438580	422631	526680	509141	1035821
Deduct Nomadic Bedu Tribes			35422	31131	35422	31131	66553
	88100	86510	403158	391500	491258	478010	969268
Deduct His Majesty's Forces	3	1	2391	112	2394	113	2507
	88097	86509	400767	391388	488864	477897	966761
Add Natural Increase Dec. 1931 to 30-6-32	1201	1151	6535	6341	7736	7492	15228
	89298	87660	407302	397729	496600	485389	981989
Add Excess of Migration „ „ „ „	1961	1874	215	290	2176	2164	4340
Estimate as at 30th June, 1932	91259	89534	407517	398019	498776	47553	986329

(b) Births, Deaths and Infant Mortality During 1932.

The Census of November, 1931, indicated that estimates of midyear populations given in previous reports which were based upon the census of 1922 were unduly low.

The difference mainly affects the Moslem section of the population, the enumeration of which appears to have been incomplete in 1922.

In order to provide a comparison of vital occurrences during recent years, the midyear populations have been revised on the basis of the 1931 census and birth and death rates recalculated.

Year.	Birth Rate per 1000 Living.	Number of Births Registered.	Estimated Population Midyear.	Number of Deaths Registered	Death Rate per 1000 Living.	Infant Deaths.	Infant Mortality i. e. Deaths of Children under 1 Year of Age per 1000 Births.
1928	48.78	42,895	879,542	23,054	26.21	7993	186.33
1929	46.32	41,742	901,090	21,632	24.00	7784	186.47
1930	48.03	44,587	928,158	19,513	21.02	6879	154.28
1931	48.07	46,011	957,191	21,149	22.09	7826	170.09
1932	44.14	43,538	986,329	21,958	22.26	6669	153.17

The readjustment had the effect of reducing the crude birth and death rates of the country and principally those of the Moslem section of the community.

The trend of the birth and deaths rates is downwards.

The decline in the birth rate affects all groups of the population but it is more evident in the Moslem and Jewish communities.

As compared with 1931, the death rate has remained stationary in all communities. It is high amongst Moslems (26 per 1000). In the Christian group, it is 15 per 1000. In the Jewish section it is 9 per 1000. In considering this low rate it is to be borne in mind that the population is to a large extent immigrant and in consequence physically selected and that its age distribution as a result of immigration is such that a relatively large proportion of lives are in the 15-45 years age group in which mortality is normally low.

The infant mortality rates for the year was 153 deaths under 1 year of age for each thousand births, compared with 170 in 1931. This figure is comparable with the year 1930 when it was 154.

The decrease in mortality under one year of age in 1932 has occurred wholly in the Moslem group of the population which fell from 187 to 164 per mille. The Christian rate rose from 133 to 141 and the Jewish from 81 to 85.

The variation in the total infant mortality rates for the country are largely determined by the fluctuations in the predominant Moslem group of the population and in this section, it appears to be influenced in recent years mainly by the absolute number of births occurring, i. e., when the number of births is high, the infant mortality for the year shows an increase, and when the number of births falls as in 1932, the infant mortality rate shows a decline.

TABLE SHOWING BIRTH, DEATH AND INFANT MORTALITY RATES BY RELIGIOUS SUB-DIVISIONS OF THE POPULATION.

		Christians	Moslems	Jews	Other Religions	Whole Country
1928	Births	38.96	53.40	34.92	43.34	48.77
	Deaths	18.27	30.72	11.94	19.95	26.21
	Infant Mortality	157.94	203.58	95.89	121.28	186.34
1929	Births	36.50	50.72	33.53	41.52	46.32
	Deaths	17.30	27.82	11.60	25.37	24.00
	Infant Mortality	155.79	204.91	89.78	166.66	186.47
1930	Births	37.65	53.16	32.95	42.80	48.03
	Deaths	15.66	24.60	9.47	18.25	21.02
	Infant Mortality	134.43	169.55	69.00	118.07	154.28
1931	Births	37.66	53.35	31.00	49.28	48.06
	Deaths	15.13	26.21	9.57	15.76	22.09
	Infant Mortality	133.53	187.52	81.60	113.36	170.10
1932	Births	36.44	48.96	29.21	43.67	44.14
	Deaths	15.90	26.31	9.65	22.27	22.26
	Infant Mortality	141.38	164.44	85.77	167.04	153.17

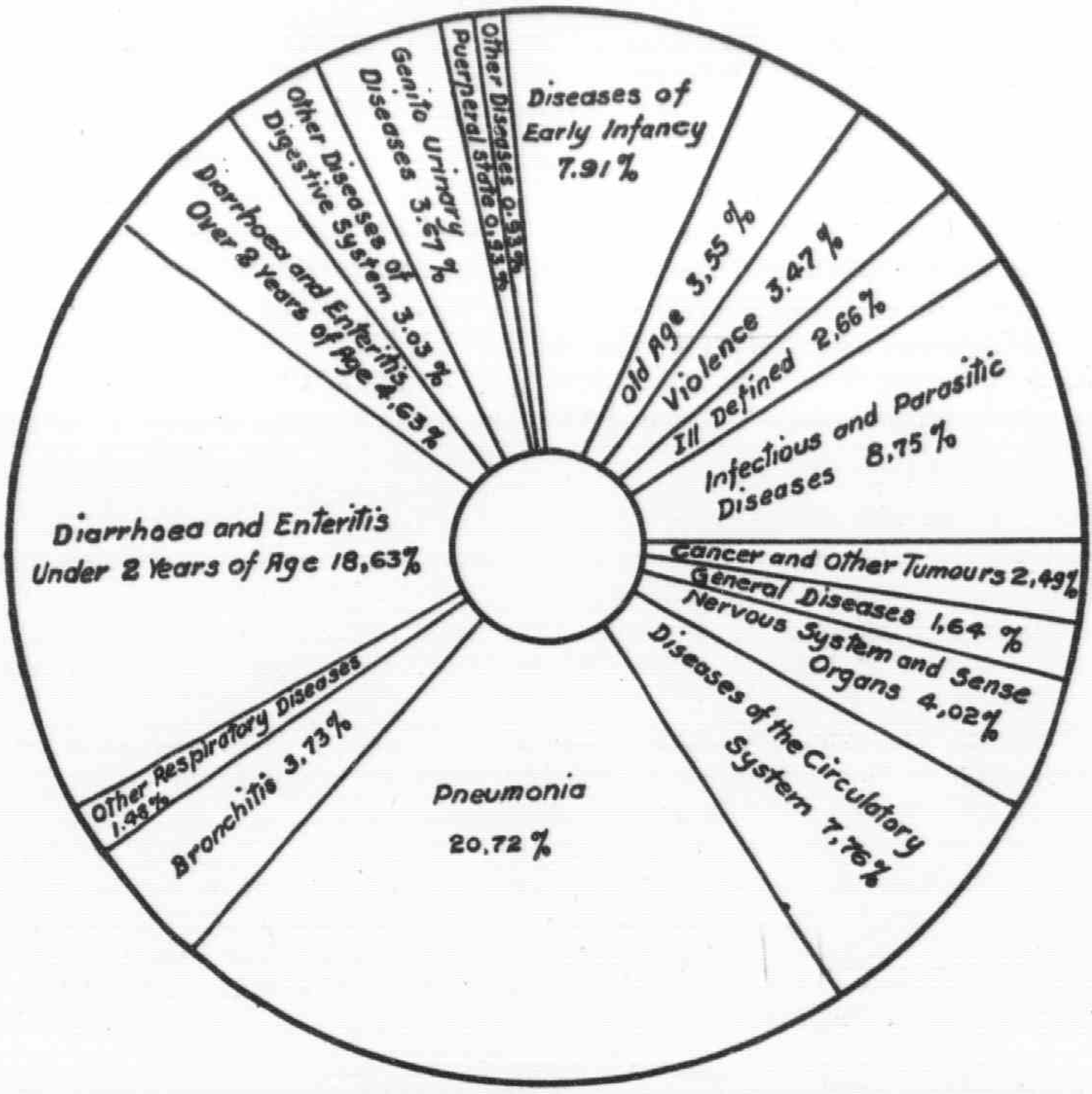
(c) Classification of Causes of Death.

The deaths notified in the principal towns have been classified in accordance with the international nomenclature of causes of death and the percentage of deaths from various causes is shown in diagramatic form.

The proportion of cases of deaths from epidemic, endemic, and infectious diseases notified to the Department throughout the whole country is also graphically represented. Cases and deaths from malaria have been excluded as notification of cases is incomplete and figures do not give an adequate indication of the conditions prevailing.

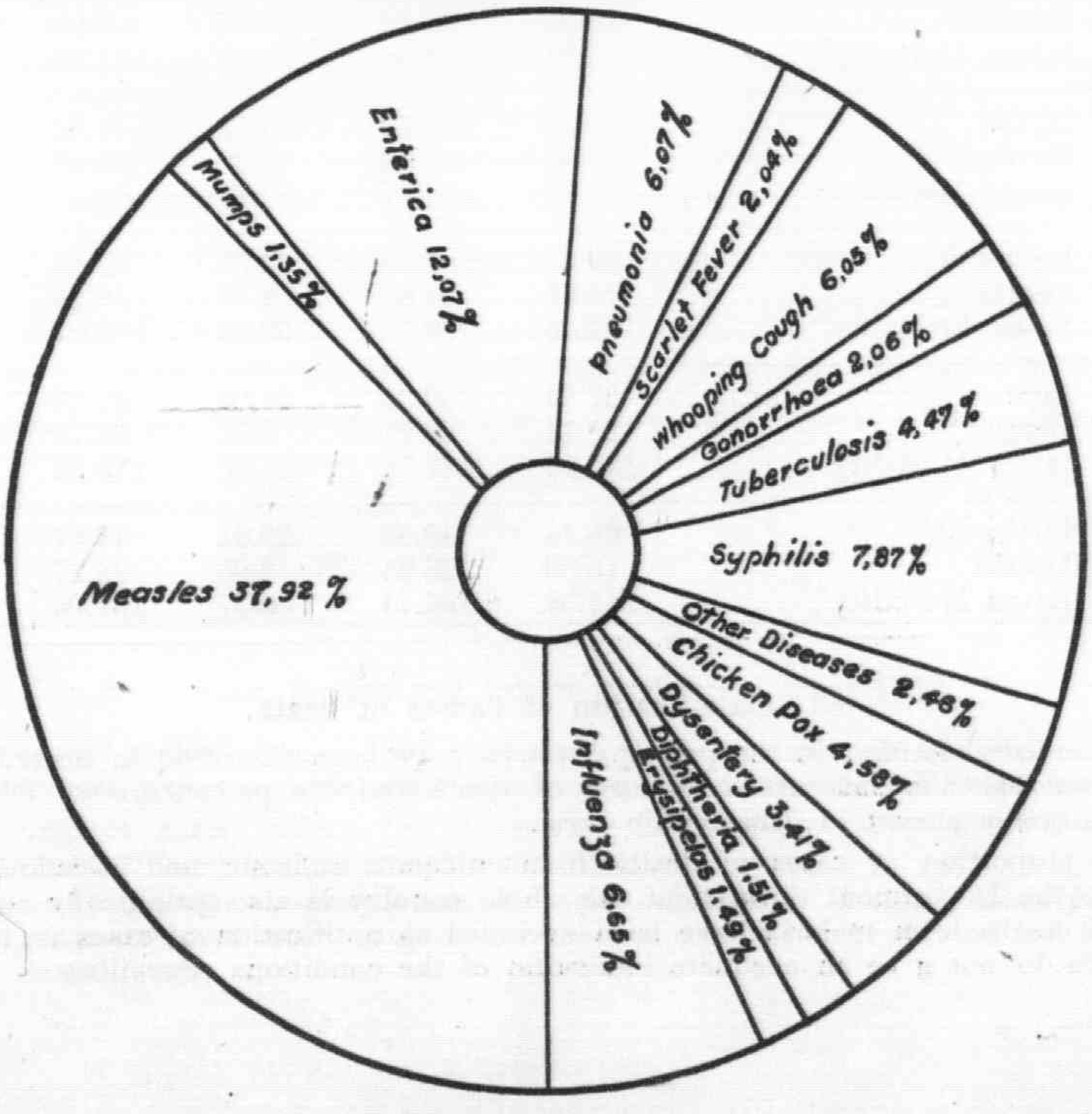
PROPORTION OF DEATHS FROM EPIDEMIC, ENDEMIC, INFECTIOUS, SYSTEMATIC AND OTHER DISEASES SHOWN AS PERCENTAGE OF TOTAL DEATHS IN ALL TOWNS OF PALESTINE, 1932.

TOTAL DEATHS=7632.



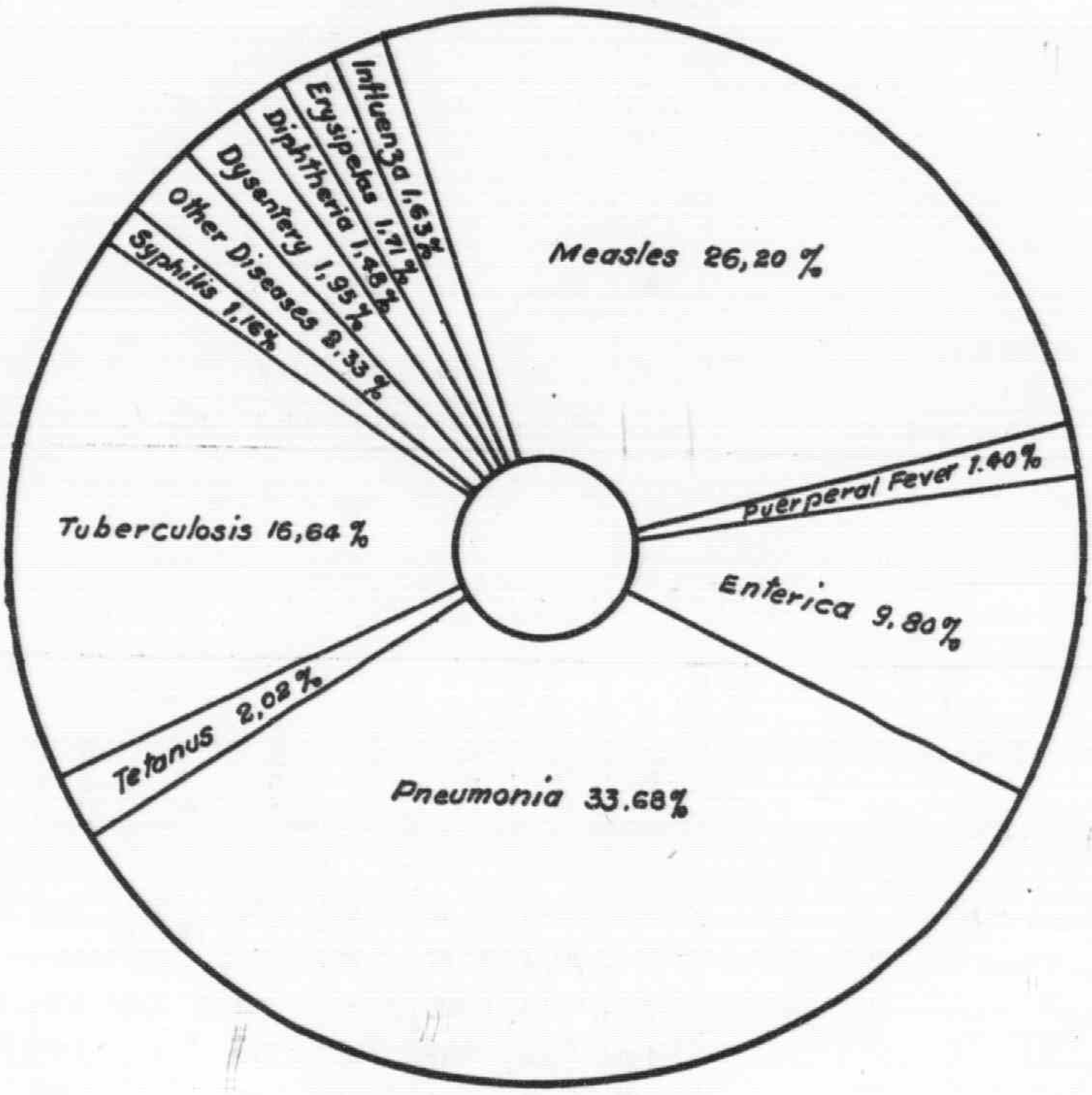
PROPORTION IN PERCENTAGES OF CASES OF EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES (MALARIA EXCEPTED) NOTIFIED IN PALESTINE IN 1932.

TOTAL INCIDENCE=11,887.



PROPORTION IN PERCENTAGES OF DEATHS FROM EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES (MALARIA EXCEPTED) NOTIFIED IN PALESTINE, 1932.

TOTAL DEATHS=1286.



BIRTHS AND DEATHS - 1932.

Town, Village or District.	Jerusalem	District	Ramallah	District	Bethlehem	District	Hebron	District	Beersheba
DEATHS.									
Under 1 month	114	64	9	57	17	19	31	61	7
1 month to 1 year	269	301	12	249	76	91	188	221	17
1 to 2 years	123	246	9	203	14	35	54	223	10
2 to 5 years	88	202	3	165	25	66	218	384	11
5 to 10 years	42	39	1	27	3	6	18	50	2
10 to 20 years	44	21	1	15	6	5	19	44	5
20 to 50 years	255	91	6	98	24	20	45	131	4
Over 50 years	550	187	19	151	69	47	82	248	12
Unknown	—	—	—	—	1	—	—	—	—
Total Deaths 1932	1485	1151	60	965	235	289	655	1362	68
Total Deaths 1931	1337	965	45	816	192	190	554	1540	50
BIRTHS. Total Births 1932	3265	2043	178	1609	272	486	1178	2186	157
Total Births 1931	3385	2196	167	1736	272	481	1144	2445	153
INFANT MORTALITY Rate per 1000 Births 1932.	117.30	178.66	117.97	190.18	341.91	226.33	185.90	129.00	152.86
Rate per 1000 Births 1931.	104.28	169.39	107.78	174.53	308.82	158.00	240.38	246.21	137.25

BIRTHS AND DEATHS - 1932.

Town, Village or District	Jaffa	District	Tel Aviv	Ramleh	District	Gaza	District	Majdal	District
DEATHS.									
Under 1 month	89	45	29	22	74	57	107	44	89
1 month to 1 year	276	144	67	86	274	128	150	78	264
1 to 2 years	219	129	20	83	302	65	104	49	240
2 to 5 years	148	85	18	41	318	143	219	110	359
5 to 10 years	31	15	11	10	30	17	32	11	35
10 to 20 years	38	12	9	6	20	20	14	2	23
20 to 50 years	171	68	83	24	95	71	57	16	93
Over 50 years	258	124	198	45	184	108	135	25	109
Unknown	—	—	—	—	—	1	—	—	—
Total Deaths 1932	1230	622	435	317	1297	610	818	335	1212
Total Deaths 1931	1098	657	392	215	1091	720	929	211	921
BIRTHS. Total Births 1932	2008	1930	1411	519	2468	1184	1681	375	2063
Total Births 1931	2037	2051	1365	516	2492	1316	1728	409	2100
INFANT MORTALITY. Rate per 1000 Births 1932	181.77	97.92	68.03	208.09	141.00	156.25	152.88	325.33	171.11
Rate per 1000 Births 1931	186.05	112.62	72.52	160.85	140.45	228.72	237.26	308.07	210.00

BIRTHS AND DEATHS - 1932.

Town, Village or District.	Haifa	District	Acre	District	Nazareth	District
DEATHS.						
Under 1 month	77	102	6	41	8	40
1 month to 1 year	188	159	20	176	46	140
1 to 2 years	101	80	29	150	23	68
2 to 5 years	75	52	15	84	14	40
5 to 10 years	25	19	3	15	7	9
10 to 20 years	30	34	6	9	17	11
20 to 50 years	166	97	23	102	41	56
Over 50 years	161	110	56	139	52	65
Unknown.	—	5	—	4	—	—
Total Deaths 1932	823	658	158	720	208	429
Total Deaths 1931	740	810	188	657	269	451
BIRTHS. Total Births 1932	2026	1661	306	1609	428	1039
Total Births 1931	2028	1953	304	1818	438	1209
INFANT MORTALITY Rate per 1000 Births 1932	130.79	157.13	84.96	134.86	126.17	173.24
Rate per 1000 Births 1931	115.87	161.29	144.73	110.01	184.93	136.47

BIRTHS AND DEATHS - 1932.

Town, Village or District.	Nablus	District	Tulkarem	District	Tiberias.	District	Safad	District	Jenin	District
DEATHS.										
Under 1 month	36	99	10	88	13	42	9	62	8	112
1 month to 1 year	64	305	34	263	14	146	35	203	12	285
1 to 2 years	39	198	3	109	18	79	15	82	16	194
2 to 5 years	127	397	40	275	10	61	32	144	7	122
5 to 10 years	28	49	7	34	5	14	2	27	—	29
10 to 20 years	23	21	1	19	5	22	3	32	1	20
20 to 50 years	85	150	18	102	27	85	30	124	8	109
Over 50 years	111	223	14	141	43	64	51	120	9	150
Unknown.	—	—	—	—	—	1	—	1	—	—
Total Deaths 1932	513	1442	127	1031	135	514	177	795	61	1021
Total Deaths 1931	564	1570	67	937	139	633	227	831	80	1063
BIRTHS. Total Births 1932	891	2511	242	2046	392	1107	417	1621	138	2091
Total Births 1931	882	2905	240	2235	379	1153	458	1741	143	2132
INFANT MORTALITY Rate per 1000 Births 1932	112.23	160.89	181.81	171.55	68.87	169.82	105.51	163.47	144.92	189.86
Rate per 1000 Births 1931.	150.79	157.65	112.50	196.42	113.45	196.87	155.02	206.77	216.77	221.85

SUMMARY OF BIRTHS AND DEATHS - 1932.

	Totals for Towns	Total for Districts excluding Beersheba
DEATHS.		
Under 1 month	586	1102
1 month to 1 year	1610	3371
1 to 2 years	1691	4417
2 to 5 years	397	1150
5 to 10 years	196	341
10 to 20 years	271	359
20 to 50 years	1145	1574
Over 50 years	1734	2001
Unknown	2	11
Total Deaths 1932	7632	14326
Total Deaths 1931	7094	14061
BIRTHS.		
Total Births 1932	15387	28151
Total Births 1931	15636	30373
INFANT MORTALITY.		
Rate per 1000 Births 1932	142.71	158.89
Rate per 1000 Births 1931	153.81	178.48

Religions	Christians	Moslems	Jews	Others	Totals	Percentage
Population	90631	704624	180793	10281	986329	
DEATHS.						
Under 1 month	112	1432	129	15	1688	7.6
1 month to 1 year	355	4242	324	60	4981	22.7
1 to 2 years	210	5699	142	57	6108	27.8
2 to 5 years	50	1445	43	9	1547	7.1
5 to 10 years	35	468	27	7	537	2.4
10 to 20 years	44	530	49	7	630	2.9
20 to 50 years	194	2206	291	28	2719	12.4
Over 50 years	440	2508	741	46	3735	17.0
Unknown	1	12	—	—	13	—
Total Deaths	1441	18542	1746	229	21958	99.9
Deaths per 1000	15.90	26.31	9.65	22.27	22.26	—
BIRTHS.						
Total Births	3303	34505	5282	448	43538	—
Births per 1000	36.44	48.96	29.21	43.67	44.14	—
INFANT MORTALITY.						
Total Deaths under 1 year	467	5674	453	75	6669	—
Rate per 1000 Births	141.38	164.44	85.77	167.04	153.17	—

2. Epidemic Service.

In view of the improved communications throughout the country, the equipment of mobile epidemic units was withdrawn from districts to Central Medical Stores. The establishment of emergency epidemic hospitals has not been required in recent years, and should occasion arise, equipment for this purpose can be issued at short notice to any part of the country.

3. Training of Personnel.

Two courses of instruction in sanitation were held — one elementary and one advanced course. The elementary course was attended by 17 of whom 12 passed, two were referred and three failed. Ten attended the advanced course. The standard for the sanitary sub-inspectors certificate has been raised and it was decided that those attending this course should undergo a further course of instruction before becoming eligible to sit the examination for this certificate.

4. Disinfection.

The Department is equipped with 35 disinfecting machines of which 25 are of portable type. In addition, for use in village areas, the Thompson disinfecting drum is employed. The work accomplished by the disinfecting service is shown in the following table:—

DISINFECTION SERVICE, 1932.

	* Method "A"	Method "B"	Number of Articles or Bundles Disinfected
Jerusalem	26	449	952
Ramallah	—	77	1488
Bethlehem	—	119	2269
Hebron	25	55	3817
Beersheba	89	41	5144
Jaffa	4	427	9894
Tel Aviv	2	263	1633
Ramle	—	46	1213
Gaza	—	319	612
Majdal	—	12	1051
Haifa	18	921	24145
Acre	17	25	109
Nazareth	1	265	1346
Kantara	—	—	—
Nablus	13	231	4165
Tulkarem	1	93	4942
Tiberias	80	117	6404
Safad	1	172	4135
Jenin	—	—	1778
TOTALS	277	3632	75097

5. Infectious and Communicable Diseases.

12,288 cases and 1288 deaths from infectious diseases were notified during the year compared with 14,917 cases and 1608 deaths in 1931. The decrease is due principally to a decline in the prevalence of measles.

The principal causes of death were pneumonia 433, measles 337, tuberculosis 214 and typhoid fever 119.

(a) **Acute Poliomyelitis.** There were 16 cases and no deaths. Nine cases occurred in Jerusalem town and district.

(b) **Cerebro-Spinal Meningitis.** 5 cases and 5 deaths were notified.

(c) **Encephalitis Lethargica.** 1 fatal case was reported.

(d) **Pneumonia.** 722 cases with 433 deaths were notified.

*** Disinfection of house of patient and neighbouring houses where necessary.**
Method "A" — For diseases originating in vermin.
Method "B" — For other diseases.

(e) **Tuberculosis.** The preliminary survey of tuberculosis commenced the previous year was interrupted as a separate activity owing to reduction of staff. Investigation was, however, carried on as opportunity presented itself in certain areas of the Southern district by Medical Officers of districts. The decrease in total cases notified and their distribution is not attributable to a decline in incidence. Of cases notified 75% are affections of the respiratory system.

(f) **Measles.** The general prevalence declined until October when there was a slight increase until the end of the year. The case fatality rate was 7.2% compared with 9.3% in 1931. The total deaths were 337 out of 4507 cases notified.

(g) **Scarlet Fever.** 243 cases with 2 deaths were notified compared with 372 cases and 4 deaths in 1931. Cases were reported mainly from the towns of Jerusalem 57, Tel Aviv 55, Haifa 23. The principal incidence occurred during the months of October, November and December. In Jerusalem town, however, the disease was mainly prevalent during the months July to September.

(h) **Typhoid Fever.** There was a slight total increase of cases notified — 1215 compared with 905 cases in 1931. This increase principally occurred in Jerusalem and Bethlehem towns and Nablus town and surrounding villages. There were outbreaks in the villages of Tireh and Mughar in the Northern District responsible for 24 and 30 cases respectively.

A considerable amount of prophylactic vaccination was done of contacts of cases. For example in Haifa 4,039 inoculations were performed and similar work was carried out in other areas.

Steps were taken to ensure early notification of cases by practitioners in order to limit spread of contact infections by early hospitalization of cases. In Jerusalem town an analysis of cases indicated that 75% occurred in persons below the age of 15 years. Of all cases notified in this country 55% occurred in persons below this age.

(i) **Paratyphoid.** The incidence remains relatively constant. 220 cases were notified during the year.

(j) **Dysenteries.** There was an increase of cases of dysentery notified — 405 cases compared with 297 in 1931. The increase was mainly in Jerusalem, Haifa and Tel Aviv towns.

(k) **Anthrax.** There were 16 cases with 3 deaths. The principal occurrence was in Haifa and district where 8 cases and 1 death occurred.

(l) **Tetanus.** There were 51 cases and 26 deaths compared with 46 cases and 30 deaths in 1931.

(m) **Puerperal Fever.** 35 cases and 18 deaths occurred. As it is only in towns that the cause of death requires notification by a medical practitioner, these figures apply mainly to deaths from puerperal fever which take place in towns. The number of live births occurring in towns in 1932 was 15,387. The figures furnish a puerperal fever death rate of 1.1 per 1000 live births.

(n) **Leprosy.** 11 new cases were reported. Three cases were inhabitants of Transjordan who came to Jerusalem for admission in the Moravian Mission Leper Home. Of the 11 cases 7 were admitted to the Leper Home and 4 were considered suitable for outpatient treatment.

(o) **Ankylostomiasis.** The area in Jaffa District in which the disease is prevalent was re-surveyed with the assistance of an expert helminthologist, Dr. J. A. Scott of the Rockefeller Foundation, whose secondment from Egypt for this purpose was kindly approved by the Foundation.

2,400 persons were examined in selected villages. In a group of 4 villages in which the incidence of infection was previously found to be high, 60% of 1500 persons examined were found to be infected and in 15% of these the intensity of infection was sufficient to cause disability varying in degree from subnormal health to severe incapacity.

The incidence of the disease was definitely associated with citrus cultivation and deficiency of sanitation in the villages.

In the programme of work which has been commenced, the installation of sanitary conveniences precedes mass treatment. The "bored hole" type of latrine is being installed. By the end of the year 528 latrines were installed in 8 villages.

It is proposed in 1933 to continue this work and to commence treatment in villages in which 90% of households have been provided with latrines. The initial treatment in those villages will be carefully controlled by stool examinations. If results are found satisfactory, the completion of sanitation in a village will be followed by routine mass treatment of the inhabitants.

(p) **Typhus and Relapsing Fever.** There were 30 sporadic cases of typhus with 1 death and 13 cases of relapsing fever. The incidence was less than last year.

CASE AND DEATH INCIDENCE OF INFECTIOUS DISEASES BY MONTHS FOR THE YEAR 1932.

	January		February		March		April		May		June		July		August		September		October		November		December		TOTALS	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Acute Poliomyelitis	—	—	1	—	1	—	—	—	4	—	4	—	1	—	1	—	—	—	—	—	4	—	—	—	16	—
Anthrax	1	—	1	—	—	—	—	-	3	—	—	—	2	—	—	—	7	2	1	—	1	—	1	1	17	3
Cerebro-Spinal Meningitis	—	—	—	—	2	2	—	—	—	—	1	1	—	—	2	2	—	—	—	—	—	—	—	—	5	5
Chicken Pox	78	—	64	—	61	—	87	—	79	—	85	—	42	1	12	—	9	—	5	—	15	—	7	—	544	1
Diphtheria	6	1	7	1	8	3	4	1	5	—	2	—	2	—	9	1	22	3	43	3	26	1	46	5	180	19
Dysentery	17	—	6	—	3	1	11	—	40	2	27	3	21	1	40	3	62	4	66	4	82	2	30	5	405	25
Encephalitis Lethargica	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Erysipelas	19	2	13	3	8	2	13	3	14	1	16	3	15	1	19	1	22	1	11	1	15	3	12	1	177	22
German Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—
Hydrophobia	—	1	—	—	1	1	—	—	1	1	—	—	—	—	2	2	—	—	—	—	—	—	—	—	4	5
Influenza	134	4	433	5	183	5	3	1	2	—	1	1	—	—	—	—	—	—	3	2	3	1	28	2	790	21
Measles	977	89	555	34	511	27	341	20	497	31	530	51	235	22	129	11	105	6	108	9	243	12	276	25	4507	337
Mumps	6	—	5	—	8	—	6	-	15	—	7	—	8	—	5	—	6	—	17	1	24	—	53	—	160	1
Para-typhoid	7	1	—	1	2	—	6	—	8	—	17	—	16	2	23	2	33	—	48	—	38	—	22	1	220	7
Pneumonia	80	47	90	52	83	44	68	39	43	28	46	32	53	26	32	27	24	15	31	20	51	29	121	74	722	433
Puerperal Fever	3	2	2	1	3	3	1	—	1	1	6	3	4	3	3	—	6	3	1	1	1	—	4	1	35	18
Relapsing Fever	—	—	—	—	—	—	1	—	2	—	3	—	1	—	2	—	2	—	1	—	—	—	1	—	13	—
Schistosomiasis	1	—	1	—	—	—	1	—	3	—	1	—	1	—	1	—	1	—	1	—	1	—	2	--	14	—
Scarlet Fever	20	—	14	—	4	1	4	—	6	—	34	-	7	—	11	—	28	—	30	—	44	—	41	1	243	2
Typhoid	45	5	17	3	23	4	28	4	37	2	140	10	198	14	142	14	188	15	130	17	159	17	108	14	1215	119
Typhus	3	—	2	—	—	—	—	—	3	—	2	1	1	—	2	—	7	—	6	—	3	—	1	—	30	1
Undulant Fever	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—	—	2	—	—	—	—	—	—	—	5	—
Whooping Cough	10	—	35	—	86	—	71	1	62	2	104	3	73	2	91	—	15	—	63	1	26	1	83	-	719	10
Gonorrhoea	10	—	18	-	26	—	7	—	30	-	12	—	16	—	24	—	20	—	30	—	27	—	25	—	245	—
Tetanus	4	2	4	3	7	3	4	1	4	—	4	3	6	3	3	3	5	3	3	—	3	2	4	3	51	26
Leprosy	—	—	1	—	—	—	—	—	1	—	3	—	3	—	—	1	—	—	2	—	2	—	2	—	14	1
Tuberculosis	27	14	27	19	38	22	32	17	73	10	109	24	40	10	48	21	34	21	48	22	24	16	31	18	531	214
Rheumatic Fever	—	—	1	—	7	—	2	—	2	—	—	—	3	—	2	—	5	-	4	—	3	—	5	—	34	—
Malaria	16	—	20	—	6	—	6	—	10	—	31	—	31	—	43	—	42	—	43	1	95	—	58	1	401	2
Syphilis	67	2	74	2	120	—	63	1	32	3	51	—	53	-	93	2	64	—	65	—	59	3	195	2	936	15
Ankylostomiasis	5	—	5	—	3	—	—	—	6	—	12	—	3	—	6	—	6	—	3	—	1	—	—	—	50	—
Epidemic Ulcer	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	2	—
Actinomycosis	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
TOTALS	1537	171	1396	124	1194	118	759	88	985	81	1249	135	837	85	746	90	715	73	764	82	950	87	1156	154	12288	1288

CASE AND DEATH INCIDENCE OF INFECTIOUS

	Jerusalem Town.		Jerusalem District.		Ramallah and District.		Bethlehem and District.		Hebron and District.		Beersheba and District.		Jaffa Town.		Jaffa District.		Tel Aviv.		Ramleh and District.	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Acute Poliomyelitis	8	—	1	—	—	—	2	—	—	—	—	—	—	—	1	—	—	—	—	—
Anthrax	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—
Cerebro-Spinal Meningitis	1	1	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—
Chicken Pox	18	1	8	—	27	—	25	—	8	—	8	—	57	—	50	—	40	—	34	—
Diphtheria	14	2	2	1	—	—	—	—	—	—	—	—	17	5	11	2	78	2	2	—
Dysentery	49	8	1	1	3	2	1	1	1	—	—	—	26	1	59	1	92	2	13	—
Encephalitis Lethargica	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Erysipelas	34	9	2	—	9	—	3	2	—	—	2	—	10	1	15	—	13	—	2	—
German Measles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hydrophobia	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—
Influenza	79	9	6	2	81	1	—	—	17	—	28	—	2	2	—	—	1	—	—	—
Measles	48	6	239	24	506	26	140	17	755	60	3	—	94	4	81	—	9	—	400	21
Mumps	4	—	—	—	10	—	—	—	1	—	—	—	3	—	1	—	2	1	1	—
Para-typhoid	25	1	6	1	—	—	4	—	—	—	—	—	38	3	52	1	56	1	—	—
Pneumonia	149	120	18	5	7	2	17	13	1	1	6	3	134	128	10	8	23	23	2	1
Puerperal Fever	8	3	5	2	—	—	1	—	1	—	1	—	3	3	1	1	3	3	—	—
Relapsing Fever	5	—	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
Scarlet Fever	57	1	4	—	—	—	2	—	1	—	—	—	14	—	22	—	55	—	39	—
Schistosomiasis	4	—	—	—	—	—	—	—	—	—	1	—	5	—	—	—	1	—	—	—
Typhoid	243	23	50	11	1	—	55	6	9	1	6	4	149	19	103	4	62	3	6	—
Typhus	3	—	—	—	—	—	—	—	—	—	—	—	1	—	3	—	2	—	—	—
Undulant Fever	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Whooping Cough	17	—	40	—	116	6	19	—	15	—	25	—	30	—	1	—	8	—	34	—
Gonorrhoea	56	—	—	—	—	—	—	—	—	—	2	—	1	—	—	—	—	—	1	—
Tetanus	2	1	2	2	—	—	—	—	—	—	—	—	10	5	9	2	—	—	—	—
Leprosy	11	1	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—
Tuberculosis	67	54	—	—	13	5	22	22	—	—	22	4	39	29	—	—	14	14	98	1
Rheumatic Fever	1	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria Fever	11	—	2	1	1	—	—	—	1	—	12	—	7	—	7	—	11	—	15	—
Syphilis	211	5	—	—	3	—	—	—	471	—	24	—	—	—	—	—	—	—	1	—
Ankylostomiasis	—	—	—	—	—	—	—	—	—	—	—	—	8	—	29	—	4	—	4	—
Epidemic Ulcer	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Actinomycosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTALS.	1129	248	388	50	778	42	291	61	1281	62	140	11	656	201	456	20	474	49	653	23

DISEASES BY LOCATIONS FOR 1932.

Gaza and District.		Majdal and District.		Haifa Town.		Haifa District.		Acre and District.		Nazareth and District.		Nablus and District.		Tulkarem and District.		Tiberias and District.		Safad and District.		Jenin and District.		TOTALS	
Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	16	—
—	—	—	—	8	1	2	—	—	—	—	—	3	1	1	1	—	—	—	—	—	—	17	3
—	—	—	—	1	1	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	5	5
10	—	—	—	27	—	33	—	6	—	22	—	44	—	9	—	61	—	45	—	12	—	544	1
—	—	—	—	37	4	6	1	1	—	5	—	—	—	2	2	4	—	1	—	—	—	180	19
1	—	—	—	65	4	23	—	7	1	16	—	2	2	—	-	11	—	35	2	—	—	405	25
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
6	1	—	—	29	2	9	—	2	—	7	—	18	2	3	2	11	3	2	—	—	—	177	22
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	4	5
18	—	—	—	140	—	23	—	251	5	41	—	—	—	28	1	75	1	—	—	—	—	790	21
62	3	332	30	3	1	1	—	—	—	5	—	838	90	772	49	35	1	3	—	181	5	4507	337
—	-	—	—	10	—	2	—	—	—	6	—	18	—	3	—	64	—	35	—	—	—	160	1
2	—	—	—	22	—	2	—	—	—	—	—	10	—	—	—	1	—	2	—	—	—	220	7
56	16	2	—	39	32	11	3	11	1	37	20	67	22	53	12	49	9	27	11	3	3	722	433
—	—	1	—	5	3	—	—	—	—	1	1	1	—	—	—	3	1	1	1	—	—	35	18
—	—	—	—	—	—	1	—	—	—	—	—	3	—	—	—	—	—	1	—	—	—	13	—
—	—	—	—	23	1	10	—	—	—	1	—	—	—	—	—	14	—	1	—	—	—	243	2
—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	14	—
28	4	—	—	260	13	52	6	9	—	33	7	120	16	1	—	9	1	19	1	—	—	1215	119
—	—	—	—	15	1	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30	1
—	—	—	—	2	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	5	—
—	—	1	—	34	2	47	—	—	—	23	—	67	—	137	1	27	—	1	—	77	1	719	10
4	—	—	—	163	—	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	245	—
6	2	—	—	7	4	4	2	—	—	2	2	6	6	—	—	3	—	—	—	—	—	51	26
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	1
43	13	—	—	123	21	25	2	22	5	6	11	13	13	2	1	15	5	6	10	1	4	531	214
1	—	—	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34	—
2	—	1	—	6	—	87	—	—	—	4	—	—	—	85	1	149	—	—	—	—	—	401	2
16	—	—	—	182	10	5	—	2	—	—	—	—	—	—	—	21	—	—	—	—	—	936	15
4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50	—
—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—
—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
259	39	338	30	1236	100	368	14	311	12	212	43	1212	154	1099	70	553	21	179	25	275	13	12288	1288

TUBERCULOSIS CLASSIFICATION 1932.

Towns

	Respiratory System		Meninges and Central Nervous System, generally		Intestines and Peritonium		Vertebral Column		Joints		Skin and Sub-Cutaneous cellular tissue		Bones (Vertebral Column excluded)		Lymphaticsystem(mesenteric and retro peritoneal glands excepted)		Genito-urinary System		Organs other than the above		Disseminated acute		Disseminated chronic		TOTALS	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Jerusalem	46	33	4	4	7	7	1	1	—	—	—	—	—	—	—	—	2	2	—	—	2	2	3	3	65	52
Ramallah	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1
Bethlehem	6	6	2	2	5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	—	—	15	15
Hebron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beersheba	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Jaffa	31	22	2	2	3	3	—	—	1	—	1	1	—	—	—	—	—	—	—	—	—	—	1	1	39	29
Tel Aviv	13	13	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	14	14
Ramleh	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	1
Gaza	17	10	—	—	1	1	—	—	1	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	22	12
Majdal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Haifa	85	16	1	1	4	1	8	—	5	1	3	—	6	2	9	—	2	—	—	—	—	—	—	—	123	21
Acre	7	—	—	—	3	—	—	—	—	—	1	—	3	—	7	—	—	—	—	—	—	—	—	—	21	—
Nazareth	4	6	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	8
Nablus	10	10	—	—	—	—	—	—	—	—	—	—	2	2	1	1	—	—	—	—	—	—	—	—	13	13
Tulkarem	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Tiberias	4	3	1	—	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	4
Safad	72	10	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	73	11
Jenin	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Towns	301	133	11	10	27	20	10	2	8	2	8	1	11	4	17	1	4	2	—	—	4	4	4	4	405	183
Villages	139	24	1	1	10	4	3	2	1	—	13	—	19	—	7	1	—	—	—	—	—	—	—	—	193	32
TOTALS	440	157	12	11	37	24	13	4	9	2	21	1	30	4	24	2	4	2	—	—	4	4	4	4	598	215

Villages

	Respiratory System		Meninges and Central Nervous System, generally		Intestines and Peritonium		Vertebral Column		Joints		Skin and Sub-Cutaneous cellular tissue		Bones (Vertebral Column excluded)		Lymphaticsystem(mesenteric and retro peritoneal glands excepted)		Genito-urinary System		Organs other than the above		Disseminated acute		Disseminated chronic		TOTALS	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Jerusalem	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2
Ramallah	7	2	—	1	1	—	—	—	—	—	—	—	3	—	—	1	—	—	—	—	—	—	—	—	11	4
Bethlehem	4	4	—	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	7
Hebron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Beersheba	1	3	—	—	1	—	—	—	1	—	11	—	7	—	—	—	—	—	—	—	—	—	—	—	21	3
Jaffa	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tel Aviv	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ramleh	81	—	—	—	1	—	1	—	—	—	1	—	6	—	5	—	—	—	—	—	—	—	—	—	95	—
Gaza	14	1	—	—	1	—	—	—	—	—	1	—	3	—	2	—	—	—	—	—	—	—	—	—	21	1
Majdal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Haifa	23	1	1	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25	2
Acre	1	4	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	5
Nazareth	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Nablus	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tulkarem	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Tiberias	5	1	—	—	2	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	1
Safad	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Jenin	—	3	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	4
Towns	139	24	1	1	10	4	3	2	1	—	13	—	19	—	7	1	—	—	—	—	—	—	—	—	193	32

6. Vaccinations — 1932.

	Results of Observation	Towns	Villages	Persons Entering Palestine		Totals
				Haifa Port	Jaffa Port	
Primary Vaccinations	Successful	13840	31950	—	30	45820
	Unsuccessful	822	1805	—	1	2628
	Not observed	1507	1404	—	7	2918
Re-Vaccinations	Successful	1356	2296	307	809	4768
	Unsuccessful	327	431	446	2325	3529
	Not observed	1065	140	812	102	2119
Totals		18917	38026	1565	3274	61782

The fact that the population is well protected against smallpox by the consistent policy of vaccination and re-vaccination carried out by the Department during the last 12 years is evidenced by the absence of cases of the disease for more than 5 years although outbreaks of considerable magnitude have occurred during this time in neighbouring countries.

During the year there were in towns 15,387 births and 16,169 primary vaccinations, whilst in the districts there were 28,151 births and 35,159 primary vaccinations.

Of 48,448 primary vaccinations the results of which were observed, 45,820, *i.e.*, 94.5$^0/_0$ were successful.

7. Malaria and Antimalarial Measures.

(a) Incidence of Malaria.

The general incidence continues to decline in the country as a whole. The average rainfall was lower, 321 mms. (mean of 38 stations) compared with 444 mms. in 1931. In consequence there was less difficulty in regulating streams and controlling breeding in wadies and other rural areas. While a low rainfall simplifies rural control measures, it does not affect to the same extent the control work in towns. As a result of the regular and routine measures in urban areas, malaria has been stamped out in all the principal towns though the experience of 1931 in Jerusalem indicates that it is unwise to reduce the establishment or organization required to maintain regular routine supervision of all potential breeding places. The spleen rate of 15,285 school children in towns examined in the latter part of the year was 0.74$^0/_0$. In 33,088 children in village schools the rate was 5.2$^0/_0$. The percentage of malaria cases in total attendances at dispensaries throughout the whole country was 0.60$^0/_0$ compared with 1.77$^0/_0$ in 1931. In 1923 it was 4.9$^0/_0$. During this period, the absolute number of attendances for all causes has almost doubled while attendances for malaria have fallen from 13,280 in 1923 to 2984 in 1932.

(b) Spleen Rate.

Year	Number of Towns or Villages	Number of Children Examined	Number of Children with Enlarged Spleen. Degree of Enlargement			Spleen Rate
			Slight	Moderate	Great	
		TOWN SCHOOL CHILDREN				
1928	19	14922	292	39	1	2.2$^0/_0$
1929	19	13699	276	53	13	2.5$^0/_0$
1930	19	16894	210	45	7	1.5$^0/_0$
1931	19	18221	199	44	15	1.4$^0/_0$
1932	19	15285	97	14	3	0.74$^0/_0$
		VILLAGE CHILDREN				
1928	561	37668	2084	717	320	7.9$^0/_0$
1929	528	38491	1981	981	358	8.6$^0/_0$
1930	520	39449	2021	1051	289	8.5$^0/_0$
1931	538	39767	1421	543	210	5.4$^0/_0$
1932	452	33088	1298	338	85	5.2$^0/_0$

(c) **Percentage of Malaria Cases among Dispensary Patients.**

Year	Total Number of Dispensary Patients	Number of Patients Treated for Malaria	Percentage of Malaria Patients
1924	285,215	11,732	4.12
1925	344,150	7,835	2.27
1926	379,092	7,956	2.09
1927	394,932	9,069	2.29
1928	410,854	7,207	1.75
1929	404,188	11,404	2.82
1930	406,623	11,503	2.82
1931	458,941	8,147	1.77
1932	495,583	2,984	0.60

The relation of average rainfall to the incidence of malaria, as indicated by dispensary attendances, is shown below for the last few years:—

Year	1928	1929	1930	1931	1932
Rainfall in mms. during season ending April	408	658	553	444	320
Percentage of malaria cases among dispensary patients	1.75	2.82	2.82	1.77	0.60

The combined spleen rates for town and village school children in Public Health districts over a period of 5 years is as follows:—

Medical District	1928	1929	1930	1931	1932
Jerusalem	1.3	1.0	0.6	0.4	0.4
Jaffa	1.0	1.2	0.8	0.4	0.3
Haifa	8.7	7.8	7.2	4.9	2.4
Samaria & Galilee	15.0	19.8	15.1	10.2	10.4

The incidence of malaria as indicated by these spleen examinations remains high in Baisan town, 14.5% in 234 examinations, and in the villages of Safad and Tiberias-Baisan districts (13% in 2239 examinations and 30% in 2376 examinations respectively).

(d) **Antimalarial Measures.**

Towns.— A general survey of all possible breeding places was made in the early spring and steps taken to render defective cisterns, etc., mosquito-proof. In Jerusalem town, for example, 154 cisterns were provided with covers of an approved pattern and 1133 potential breeding places protected. There are in Jerusalem area 44,463 potential breeding places under routine supervision. As a result of measures taken, the consumption of oil was reduced by 11,218 kilos though the number of places under supervision was increased by 5,878.

Routine measures of control throughout the country involved the oiling of 282,200 potential breeding places in rural areas and 752,430 in towns. 11,157 cisterns were made mosquito-proof during the year and 501,287 metres of canals and drainage ditches controlled. In rural areas routine work involved 41,287 days labour.

(e) **Drainage Schemes.**

No large reclamation schemes were undertaken by Government during the year. Existing schemes were maintained and improved by further work. At the Ain Saadeh, 381 metres of cement tiles and 721 metres of clay tiles were laid to close open channels and facilitate filling. The final work done in the Kishon last year has proved very satisfactory. The records of the mosquito catching stations in this area were exceptionally low (25 as compared with 2877 in 1931). Constant inspection and minor maintenance is still required.

The Wadi Suleiman gave breeding of *A. multicolor* in April, *A. elutus* in June and July, and *A. multicolor* in August. Control was maintained by periodic cleaning and use of Paris Green. A proposal to fill the water collecting area has been under consideration.

Between the Kishon and the Railway Workshops, a large number of agricultural wells are under supervision, to the number of 400. This area extending Eastwards to that dealt with by the Fuara drainage scheme carried out by the Haifa Bay Development Company, has been successfully rendered free from malaria.

Additional drainage work was carried out in the Rubin Marshes with funds provided partly by the Wakf. The river Rubin itself was brought under control. As a result, there was an exceptionally low incidence of malaria this year in pilgrims visiting this area for the Nebi Rubin festival in September.

The drainage work in the Wady Gaza was renewed in spring. The result of this work, which has to be renewed after the floods each year, has proved satisfactory. No cases of malaria occurred amongst the staff of the archaeological expedition at Tel-Ajjul. Primary cases of malaria reported in Gaza dropped from 19 in 1931 to 1.

Work was also carried out in Wady el Shallal in Beersheba District; 2 kilometres of the wady was canalised, 3000 metres length cleaned and some 13,000 square metres of marshy land drained and dried.

About 1500 metres of Wady el Sharia was canalised; also some minor work was done at Martaba. Labour was provided willingly by the Bedouin.

The Senior Medical Officer, Samaria & Galilee, reports :—

"Antimalarial work carried out by the Palestine Hydro-Electric Company at Jisr Majamieh has so far been apparently successful in so far as the Company's personnel and the Transjordan Frontier Force Camp are concerned. Whether this is due to anti-mosquito measures or to screening and treatment of personnel is not very certain. I found in December a 50% spleen rate in 22 children of the untreated and unscreened population surrounding the station which suggests that the work may not be a complete success. Further investigation of this point is required in the coming year".

At El Hamme, the concessionaire's employee has done very good work during the summer in controlling the breeding of mosquitoes along the edge of the Yarmuk river. This is an extremely difficult area to control.

Work on the irrigation channels has been completed and this part of the area is now quite controllable. Investigations require to be made as to how far control has to be extended up and down the river. The area cannot be considered at all safe as yet for residence, a matter of some importance in regard to the development of the thermal bath establishments here.

ANTIMALARIA STATISTICS FOR THE YEAR 1932.

Towns

Month	Number of fresh possible breeding places discovered				Number of Places							Number of prosecutions	Number of kilos of paraffin used	Number of kilos of crude oil used	Number of kilos of solar oil used
						Breeding									
	Wells	Cisterns	Other Places	Cesspits	Inspected	Anopheles	Culex	Anopheles and Culex	Oiled	Made mosquito proof by sealing, covering or other means	To which pumps fitted				
January	4	67	356	660	171465	5	391	4	54171	877	92	15	—	—	3945
February	4	38	245	336	156841	9	587	3	53519	1292	28	2	—	—	3999
March	—	17	44	59	178988	5	709	2	56210	257	14	15	—	—	4469
April	2	133	695	950	193349	7	986	2	60876	1633	67	15	—	—	4781
May	—	23	645	799	209532	2	1194	3	62080	1258	8	9	—	—	4723
June	75	275	553	373	213909	8	1744	1	61850	595	71	14	—	—	5010
July	12	44	289	430	213622	9	2423	2	64227	1267	24	33	—	—	4959
August	19	8	81	240	220346	—	2895	—	66708	165	44	34	—	—	5628
September	7	17	102	40	212677	1	2169	—	64104	265	46	19	—	—	5250
October	—	17	91	48	225288	4	2635	—	72677	182	58	18	—	—	5414
November	—	31	87	96	222472	—	2330	—	73466	298	19	52	—	—	6251
December	47	32	255	206	206579	2	1098	—	62542	738	75	7	—	—	5003
TOTALS	170	702	3443	4237	2425068	52	19151	17	752430	8827	546	233	—	—	59432

ANTIMALARIA STATISTICS FOR THE YEAR 1932.

Villages.

	Number of visits to villages	Number of new wells and cisterns found	Number of other new possible breeding places found	Number of places in which mosquito larvae found	Number of places oiled	Number of places closed, repaired and made mosquito proof	Number of persons treated with quinine	Number of prosecutions	Number of kilos of Paris Green used	Number of kilos of crude oil used	Number of kilos of solar oil used	Grammes of quinine expended
January	1372	184	31	1410	23761	204	92	88	5	—	2569	480
February	1370	177	62	1412	26388	415	102	22	6	—	3248	352
March	1364	121	14	1234	25760	246	—	69	6	—	3097	—
April	1346	141	142	1006	25678	128	43	50	191	—	2965	344
May	1387	116	35	793	24566	125	33	92	217	—	3014	264
June	1330	184	29	603	21837	263	64	185	206	—	2684	512
July	1373	447	245	445	21565	460	56	100	201	—	2678	448
August	1347	63	131	507	22782	73	20	55	192	—	2933	160
September	1377	77	4	483	19530	154	154	139	209	—	2642	1032
October	1346	114	5	732	22046	106	82	89	186	—	2974	320
November	1361	315	25	1227	23577	123	18	78	100	—	3147	144
December	1351	46	24	1591	24710	68	108	50	43	—	3220	864
TOTALS	16324	1985	747	11443	282200	2365	772	1017	1562	—	35171	4920

8. Hydrophobia.

There were 5 deaths from this disease during the year compared with 6 in 1931 and 4 in 1930.

1728 persons applied for advice at the various treatment centres throughout the country, of these 1690 received treatment.

There were 29,433 animals destroyed in the antirabic measures carried out by the Department of Agriculture, Police, and by Municipalities.

The compulsory destruction of dogs kept as domestic pets which have been responsible for biting human beings on more than one occasion roused opposition in persons who place a higher value on dog life than on the protection of the public from this dreadful and invariably fatal disease. A test case brought in court showed that drafting of the empowering regulations was defective and open to objection on legal grounds. The revision of the regulations is now in hand.

ANIMALS DESTROYED IN ANTIRABIC CAMPAIGN — 1932.

	Number of Animals killed in Antirabic Measures				
	Dept. of Health	Dept. of Agriculture	Dept. of Police and Prisons	Municipalities	Totals
Jerusalem	—	—	350	1359	1709
Ramallah	3	727	1	64	795
Bethlehem	30	144	97	31	302
Hebron	—	—	727	1	728
Beersheba	—	35	2	207	244
Jaffa	—	1526	—	221	1747
Tel Aviv	—	532	—	3003	3535
Ramleh	—	1654	—	80	1734
Gaza	—	1062	447	486	1995
Majdal	—	751	26	22	799
Haifa	—	—	88	759	847
Acre	—	178	—	—	178
Nazareth	—	—	518	348	866
Nablus	—	1500	943	276	2719
Tulkarem	—	1055	132	—	1187
Tiberias	—	1340	1307	—	2647
Safad	—	1356	—	293	1649
Jenin	—	1795	—	—	1795
Unclassified	—	—	—	—	3957
TOTALS	33	13655	4638	7150	29433

III. MEDICAL SECTION.

1. Government and Municipal Hospitals.

The Beersheba hospital was reduced to a casualty post of 4 beds. The outpatient, general and ophthalmic clinics continued.

At Acre the additions to the sick bay of the central prison were commenced with prison labour to allow of the establishment of a hospital-equipped ward for serious cases. As soon as this is ready Acre hospital will be closed, and the outpatient, general and ophthalmic clinics, and the infant welfare centre retained. Surgical cases requiring operation from amongst prisoners will be transferred to Haifa Government Hospital, where a special section is being prepared.

The alterations to the old St. Luke's hospital, adjacent to the Government hospital, Haifa, to allow of expansion by 50 beds were put in hand, and should relieve the hospital situation considerably and make up for the closure of Acre hospital.

The following structural improvements were carried out in Government and Municipal Hospitals:—

JERUSALEM DISTRICT.

1. Government Hospital — Main Building.

(a) Improvement of operating theatre.

(b) Improvement of outpatients clinic and kitchen, and electric installation.

2. Government Hospital — Maternity Section.

Remodelling of sanitation.

3. Mental Hospital Number 1, Bethlehem.

Various minor additions and alterations.

4. Mental Hospital Number 2, Bethlehem.

Ex-Swedish hospital building acquired, extensive repairs made, and additional accommodation provided for 50 mental cases.

5. Beersheba Hospital.

(a) Water supply installed.

(b) Sanitation remodelled.

JAFFA DISTRICT.

1. Jaffa Hospital.

(a) Complete renovation of all sections of the hospital, at a total cost of £P. 1400.

(b) Improvements to operating room, kitchen block and mortuary.

2. Gaza — District Health Office and Clinic.

Tiling of floors of 2 rooms used as ophthalmic clinic.

3. Gaza Hospital.

(a) Installation of additional water tanks.

(b) Construction of two detention rooms for mental patients.

HAIFA DISTRICT.

1. St. Luke's Hospital Building.

This building was acquired, extensive repairs and improvements carried out, and provision made for 50 additional beds, a new pharmacy, and outpatients clinic.

2. Existing General Hospital Building.

Existing general hospital building improved and repaired and bed capacity enlarged. Laboratory and X-Ray facilities provided.

NABLUS.

Watan Hospital.

Remodelling of ward kitchens and bath-rooms.

A sum of £P. 1400 was expended in reconditioning the Jaffa Municipal Hospital, and maintenance of the other Government and Municipal Hospitals was satisfactorily carried out.

The total number of beds in Government and Municipal Hospitals was 538 of which 409 are reserved for general cases and 129 beds for infectious diseases. The daily average number of beds occupied was 416.8. The total number admitted including admissions to Tel Aviv Township Hospital was 12,910; of these 4831 were Moslems, 1511 Christians, and 6532 Jews. The total number of sick days, excluding Tel Aviv Township Hospital, amounted to 90,392.

Patients treated, excluding Tel Aviv Township Hospital, included 44 members of His Majesty's Forces, 17 Transjordan Frontier Force, 349 British Police, 320 Palestine Police, 218 Railway Employees, 428 other Government employees, and 266 prisoners.

Apart from these patients, 1088 prisoners were treated by the Department in sick detention wards of the Central Prisons, and 19 prisoners suffering from tuberculosis were admitted to the special ward of Acre prison.

It was necessary during the year to utilize a considerable number of beds in the general medical wards for enteric fever cases.

At Haifa a special extension of 10 beds was arranged, and a reserve, in a separate building, of 30 beds was established but was not actually used.

The X-Ray section in the Government Hospital, Jerusalem, dealt with 981 cases and radiographs taken numbered 2067.

2. Medical Care of the British Community by Specialist Surgeon.

(a) British Patients.

8342 visits were made during 1932 to patients, both British and non-Palestinian, mostly the former and nearly all in Jerusalem. There is an increase in the number of British constables' wives and families.

The usual diseases cited in former years appeared at the usual seasons and it cannot be said that anything of an epidemic nature was observed, either in respiratory or intestinal affections. More jaundice cases than usual were encountered but with no relation to each other. Appendicitis was less frequent—19 as compared with 25 in 1931, 11 of these being British Police. For the first time in a number of years, diseases of the typhoid group have appeared among the British residents. Certain cases had been quite recently inoculated, though others had not had regular inoculation. Isolated cases of Scarlet Fever were encountered early in the year.

(b) British Section, Government Hospital, Jerusalem.

There were 251 admissions during the year as follows:- 135 British Constables, 25 Government Officials (male), 2 T.J.F.F., 6 Army, 10 non-official residents (male) and 73 women and children — 4 of the women being Government Officials. On the whole, there were fewer British police but a decided increase in women and children, due mainly to admissions of constables' wives and families. This latter was sufficient at times to compel admission of British patients to the main hospital as well, producing a certain amount of disjunction in the normal supervision.

Of the non-official cases, only one was a visitor to the country. Three deaths occurred in hospital cases — one of tuberculosis of the lungs in a constable, one of ovarian carcinoma in an official, and one of a child due to uncontrollable birth injuries. There were 18 deliveries — 6 males and 12 females — this being the largest number of any year to-date; two required forceps and one version.

A total of 77 operations on British patients was carried out — 19 being for appendicitis. One case of ruptured pyloric ulcer occurred. There was a considerable number of minor out-patient operations.

(c) Surgery in Jerusalem Hospital.

828 operations were performed during the year, 329 being classed as major. The majority of these came under the Medical Officer in charge of the hospital and the same mutual cooperation and assistance obtained as mentioned in former reports. As indicated in previous years, there appears to be a tendency for increase in appendicitis in the general population and this is borne out this year by the increase of cases among Palestinians from 28 to 35. Hernia is less frequent due mainly to lack of beds particularly in the summer months when admissions for typhoid blocked any but urgent cases. On the whole, the usual variety of operations occurred and the attached list gives the best indication of the conditions encountered. There seemed to be more dependence on the Government Hospital than in former years for admissions and this may be due to either

or both of two factors — inability of other hospitals to admit either through lack of room or financial reductions, or an increased confidence in Government activities and facilities for general health purposes.

(d) District and Other Hospitals.

A total of 131 visits were made to hospitals other than the Jerusalem General Hospital as follows:—

Government and Municipal:—

Haifa	4
Acre	1
Nablus	13
Jaffa	12
Gaza	1
Beersheba	1
Bethlehem Mental	6
Tulkarem Clinic	1
Ramleh Clinic	1

Non-Government Hospitals:—

Scottish Mission, Tiberias	1
E.M.M.S., Nazareth	1
C.M.S., Gaza	1
C.M.S. Es-Salt	1
St. Luke's, Hebron	1
Palestine General, Sarafand	5
Army Camp, Jerusalem	2
Amman	2
Non-Government, Jerusalem	77
	131

(e) Hospital Amenities.

The General improvement in Government hospitals throughout the country, both as regards buildings and internal equipment, has added much to the efficiency, and the increase of supervisory staff in British Sisters has made for better and more homogenous work. This is probably more apparent in Jerusalem, but extension is being made, in Haifa and Jaffa, for both X-Ray and theatre facilities. The theatre in Jerusalem was reconstructed; lighting was improved by the provision of a shadowless lamp and ventilation by the installation of an exhaust fan. The use of electrical apparatus has been greatly facilitated by the connection of the electric plant both to the main public supply and to the supply of Public Works Department.

The X-Ray section of the Jerusalem hospital, in spite of the regulations made to prevent competition with existing X-Ray institutes, still continues to carry out almost as much work as before. As accident and medico-legal cases are referred to this hospital almost as a routine, the numbers are not apt to decline. There were 981 cases and 2067 radiographs. The increase of cases for opaque meals and pyelography adds much to the time and preparation for individual cases. With the provision of trolley sets in Haifa and Jaffa fewer cases of reference, except for special examination, are likely to be sent to Jerusalem.

Last year it was noted that there was a diminution of venereal disease in the British Police. This holds good for this year and fewer cases with complications were admitted as will be seen in the attached list of diseases. 22 cases occurred in the year, 5 being syphilis; 6 only were admitted to hospital. This is from the whole of Palestine.

During the absence of the Surgeon Specialist on leave this year, the Senior Medical Officer, Palestine Railways, continued the supervision of British cases.

(f) Major Operations — Jerusalem Hospital.

These include the following:—

Amputations	7
Appendicectomy	54
Colostomy	1
Enterorrhapy	4
Fractured Skull (trephine etc.)	10
Gastrorrhapy	1
Gynaecological	10
Herniotomy	20
Haemorrhoidectomy	8

Laparotomy (emergency and exploring)		5
Lithotomy (suprapubic)		2
Litholopaxy		1
Liver Abcess		1
Ligation Axillary Artery		1
Meniscotomy		2
Myomectomy		1
Nephrolithotomy		1
Nerve Suture		1
Obstetrical — Embryotomy	4	
Forceps	25	
Version	10	
Others	29	68
Osteosynthesis		5
Ovariotomy		1
Orchidectomy		1
Prostatectomy.		1
Resection of bowel		1
Resection of ribs		2
Tonsillectomy		10
Tumours (excision)		10
Urethrotomy (external)		1

(g) Diseases of British Patients Admitted to Hospital.

	Residents		Visitors	
General Diseases	Cases	Deaths	Cases	Deaths
Influenza	15	—	—	—
Sandfly Fever	6	—	—	—
Pyrexia	2	—	—	—
Malaria with Secondary Anaemia	1	—	—	—
Diabetes	2	—	—	—
Respiratory System.				
Bronchitis	7	—	—	—
Pharyngitis and Laryngitis	7	—	—	—
Tonsilar Conditions	7	—	—	—
Pulmonary Tuberculosis	3	1	—	—
Bronchitis with Pleurisy	1	—	—	—
Broncho-Pneumonia	2	—	—	—
Asthma	1	—	—	—
Chronic Diaphragmatic Pleurisy	1	—	—	—
Female Reproductive System.				
Confinements	18	1 (child)	—	—
Pelvic Tumour with Metastasis	1	—	—	—
Incomplete Abortion	3	—	—	—
Ruptured Perineum	1	—	—	—
Ovarian Carcinoma	1	1	—	—
Various	6	—	—	—
Bones and Joints.				
Sprains	7	—	—	—
Injury Extremities	5	—	—	—
Synovitis	5	—	—	—
Osteomyelitis	1	—	—	—
Cartilage of Knee	2	—	—	—
Dislocations	3	—	—	—
Fractures	6	—	1	—
Hammer Toe	1	—	—	—
Osteo-Arthritis	1	—	—	—
Infectious.				
Typhoid Fever	4	—	—	—
Paratyphoid "A"	1	—	—	—
Scarlet Fever	3	—	—	-
Diphtheria	1	—	—	—
Syphilis and Gonorrhoea	1	—	—	—
Syphilis	1	—	—	—
Gonorrhoea	1	—	—	—
Orchitis and Epidymetis	3	—	—	—

3. Medical Care of British Community of Haifa and District by the Senior Medical Officer, Railways.

With the steady increase in the numbers of the British community in Haifa there is a corresponding increase in consultative and hospital work amongst it.

The Iraq Petroleum Company which accounts for the main increase in the British community in Haifa has its own medical organization but in a considerable number of cases the S.M.O. Railways has been called in consultation or had the care of such cases when admitted to hospitals. The other main source of increase has been due to the concentration of troops at Haifa from the surrounding district in the early part of 1932. There is a reception station at the Bath Galim barracks, but no adequate facilities for nursing of seriously ill patients, and in practice most of such patients have been accommodated in the Government Hospital at Haifa.

In the early summer of 1932, a second British Nursing Sister was detailed to Haifa and this has been greatly appreciated by all concerned and resulted in a general improvement in the nursing standard at the general and infectious hospitals.

At times, the accommodation for British patients has been less than adequate and the proposed "Police Ward" in the St. Luke's extension is urgently required. The X-Ray plant ordered for Haifa had not been installed by the end of the year but should be early in 1933; two rooms under the present Pathological Laboratory are being remodelled for use as X-Ray room and dark room. The S.M.O. Railways has been privileged to share largely in the surgical work of the hospital with the Medical Officer in charge and he wishes to express his appreciation of the Medical Officer's valuable assistance in both medical and surgical work amongst the British community. The close proximity of the Pathological Laboratory and the fact of the Pathologist being in charge of beds at the Infectious Hospital, is felt to be of great value to the medical work and his advice and assistance have been in demand for British patients many times.

The health of the British community in Haifa is generally speaking very good and there has been no epidemic amongst it.

There have been more cases of enteric fever than usual — six cases of typhoid and two of paratyphoid B. All occurred in patients inoculated within two years of the illness, but none gave rise to any serious anxiety.

There have been 1030 consultations at the hospital clinic or at the houses of British patients and the British police account for about half of this number.

Inspection of Police Quarters.

Visits have been paid to British police billets in Haifa, Nazareth, and Acre.

Treatment in the Government Hospital, Haifa.

In all there were 134 admissions to the Government Hospital, Haifa. This number was made up of the following categories :—

British Police	66
Troops	33
Women and Children	13
Government Officials	12
Civilians (male)	10
Total :—	134

The following major operations have been performed on British patients in the course of the year :—

Condition :—	Operation	Result
Retroverted Uterus	Hysteropexy	Improved
Twisted Ovarian Cyst	Ophorectomy	Cured
Prolonged Labour	Forceps Delivery	Successful
Dislocated Left Ankle Joint	Reduction	Cured
Septic Tonsils	Tonsillectomy	Cured
Acute Appendicitis	Appendicectomy	Cured
Subacute Appendicitis	Appendicectomy	Cured
Acute Mastoitidis	Mastoidectomy	Improved
Acute Intestinal Obstruction Secondary to Cancer of the Bladder	Enterostomy	Died
Suppurating Glands of Neck	Drainage	Cured

4 Government Dispensaries.

There are 15 Government Dispensaries
3 Medical Inspection Rooms
11 Railway Clinics.

Medical Officers of sub-districts extend treatment to villagers on their tours of inspection and regular weekly or fortnightly clinics, are held in 9 villages.

Medical aid in Government dispensaries is limited to the poor and to Government employees, except where no private practitioner or other medical assistance is available. A small charge for treatment and medicine is made to those who can pay.

The number of cases attending for treatment during 1932 was 291,306 as compared with 252,166 during 1931.

Attendances at Government village clinics during 1932 were 6976.

5. Voluntary Hospitals and Clinics.

The nominal bedstrength of voluntary hospitals was 1584, including special hospitals for ophthalmic diseases, mental diseases, leprosy, tuberculosis, and convalescent homes.

Beds available for general medical and surgical treatment were 1414.

A considerable number of beds in voluntary hospitals were not opened up on account of shortage of funds. Of the 1414 general beds available, the daily average number occupied was 833.5. The total admission was 23,246, of which 11,409 were Jews, 5935 Moslems, and 5902 Christians and others.

Attendances at hospital clinics were 1,172,585 compared with 1,125,409 in 1931.

Attendances at village clinics were 452,881 compared with 465,109 in 1931.

The following table indicates the work done at these village clinics :-

	Number of Clinics	Total Attendances	New Patients			
			Malaria	Eye Diseases	Other Diseases	Total
Jewish Federation of Labour	12103	263727	349	5228	82620	88197
Rural Sick Benefit Fund	4516	124222	276	2671	15519	18466
Jointly by the Jewish Federation of Labour and Rural Sick Benefit Fund	1387	17771	17	603	5980	6600
Colony Committees	2369	36198	120	2080	10137	12337
Church Missionary Society	301	10963	232	738	3830	4800
TOTALS	20676	452881	994	11320	118086	130400

There was no material change in the valuable medical activities of the C. M. S. Hospitals, Scottish Hospital, Edinburgh Mission Hospital, and in Italian, German and French Hospitals.

Dr. Forster was appointed to the Jerusalem and the East Mission Hospital at Hebron. This hospital undertook the treatment of the Municipal poor and assisted the Department in children's clinics. It also established a training centre for nurses.

The English Mission Hospital in Jerusalem lost the valuable services of Dr. Orr-Ewing, and gained those of Dr. McLean.

In view of a further reduction in foreign contributions to the Hadassah Medical Organization, more economies had to be effected by still further transferring to the local communities the cost of hospital maintenance and of the rural medical service.

The Kupat Cholim (Sick Benefit Fund of the Jewish Labour Federation) increased its membership and augmented its funds to £P. 57,772 p. a. The contribution from the Jewish Agency to this Fund ceased during the year, and as a result the Emek Hospital near Afula was closed down for two months in the summer and hospital cases during that period from amongst the comparatively small population of Jews in that district were transferred, when necessary, to the Government Hospital at Haifa or elsewhere.

The Rothschild, Shaare Zedek and Bikur Cholim Hospitals continued to render very good service to the Jews of Jerusalem.

The Leper Hospital maintained by the Moravian Mission in Jerusalem dealt with an average of 21 cases. There were 8 new admissions.

A classification by religions of the 632,608 new patients attending Government and Voluntary outpatient dispensaries and village clinics, and a similar classification in the case of 38,571 admissions to hospitals is as follows:—

	Outpatients	Admissions to Hospital
Moslems	195,724	11,987
Jews	382,457	18,980
Christians and Others	54,427	7,604

Under this classification, the following are the new attendances and admission rates in each group of the population:—

	Outpatients	Admission to Hospital
Moslems per 1000	253.8	15.5
Jews per 1000	2115.4	104.9
Christians and others per 1000	539.3	75.3

6. Training of Nurses.

The examination for the Government graduate nurse's certificate again took place in April and October under examining boards appointed from the doctors and matrons of hospitals recognised as training schools.

The following are the results of the examinations:—

Name of Training School	1st Year	2nd Year	3rd Year
Government and Municipal Hospitals	15	7	5
Hadassah (Rothschild) Hospital, Jerusalem	16	7	11
Church Missionary Society Hospitals	—	6	4
English Mission Hospital, Jerusalem	2	1	3
Edinburgh Medical Mission Hospital, Nazareth	1	2	1
Scottish Mission Hospital, Tiberias	3	2	—

Since 1920, 318 nurses have passed the examination for and obtained the Graduate Nurse's Certificate.

Ten graduate nurses completed the 6 months' course of training at the Midwives Training School of the Department in Jerusalem.

Ten graduate nurses took refresher courses in ophthalmic nursing at the Ophthalmic Hospital of the Order of St. John, Jerusalem.

HOSPITAL NURSING STAFFS—1932.

Name of Organization	Bed Strengths	Matrons	Staff Nurses	Nurses Under Training			Number not Under Training	Total
				1st Year	2nd Year	3rd Year		
GOVERNMENT AND MUNICIPAL HOSPITALS INCLUDING BETHLEHEM MENTAL HOSPITAL, BEERSHEBA AND RAMLEH CASUALTY POSTS	682	7	42(c)	16	14	8	62	149
VOLUNTARY HOSPITAL ORGANIZATIONS INCLUDING EZRATH NASHIM								
Hadassah Medical Organization	239	3	32(b)	19	12	8	13	87
Church Missionary Society	165	3	5	7	3	5	2	25
Kupat Cholim	105	1	6	—	—	—	6	13
Tutors and Protectors of the Jewish Community in the Holy Land, Amsterdam	53	1	3	—	—	—	13	17
Misgab Ladach	35	1	3	-	—	—	3	7
Bicur Cholim Society	94	3	18	—	—	—	5	26
Italian Hospital, Jerusalem	60	1	15	—	—	—	—	16
Church Mission to the Jews	70	1	4	4	2	1	1	13
The Order of St. John of Jerusalem in England	45	3(a)	—	—	—	—	—	3
International Moravian Church, London	60	1	3	—	—	—	—	4
German Deaconness Hospital, Jerusalem	60	1	8	—	—	—	13	22
German Temple Society, Jaffa	20	1	2	—	—	—	1	4
Jerusalem and the East Mission	32	1	2	—	—	—	6	9
Italian Association, Haifa	30	1	7	—	—	—	—	8
St. Charles Congregation, Haifa	30	1	5	—	--	—	2	8
Edinburgh Medical Mission Society	50	1	2	5	2	2	4	16
United Free Church of Scotland	60	1	3	2	4	2	2	14
Ezrath Nashim Women's Society Home for Insane and Incurables	50	—	2	—	—	—	14	16
French Hospitals	376	4	32	1	—	1	24	62
TOTALS	2316	36	194	54	37	27	171	519

(a) 2 assistant matrons.

(b) 1 staff nurse and 1 nurse doing part time.

(c) 1 temporarily relieving staff nurse posted in Ramleh.

GOVERNMENT AND MUNICIPAL HOSPITALS—1932.

General and Infectious.

Location of Hospital	Bed Strength				Admissisons					Deaths	Dis-charges	Daily Average in Hospital	Remarks
	General	Isolation	British	Maternity	Moslems	Christians	Jews	Other Religions	Total				
Jerusalem, Government	70	11	6	16	1049	767	121	1	1938	94	1838	67.9	
Haifa, Government	48	55	7	—	744	330	389	12	1475	88	1368	50.4	
Acre, Municipal	24	5	—	—	330	64	7	21	422	23	400	15.1	
Jaffa, Municipal	41	25	7	—	999	265	371	—	1635	83	1542	58.2	
Gaza, Municipal	20	9	2	2	576	22	2	2	602	31	572	17.6	
Nablus, Watan	57	4	—	4	1130	61	2	—	1193	90	1104	44.0	
Tel Aviv, Township	73	20	—	32	3	2	5640	—	5645	216	5426	163.6	
TOTALS	333	129	22	54	4831	1511	6532	36	12910	625	12250	416.8	

PRISON SICK DETENTION WARDS.

Jerusalem	14	445	14	92	—	551	—	554	6.9	
Acre, General Ward	20	470	29	32	6	537	—	535	17.9	
Acre, Tuberculosis Ward	20	15	1	1	2	19	—	17	12.2	
Acre, Criminal Lunatics Ward	14	2	1	3	—	6	1	4	13.1	
TOTALS	68	932	45	128	8	1113	1	1110	50.1	

GOVERNMENT DISPENSARIES AND CLINICS EXCLUSIVE OF OPHTHALMIC AND OTHER SPECIAL CLINICS — 1932.

Location	Total Number of Attendances	New Cases							
		Total New Cases	By Diseases			By Religions			
			Malaria	Eye Diseases	Other Diseases	Moslems	Christians	Jews	Other Religions
Jerusalem Dispensary	19068	9454	—	101	9353	5544	2384	1526	—
Ramallah "	2119	1912	71	39	1802	1395	516	1	—
Hebron "	2679	1670	1	124	1545	1576	92	2	—
Beersheba "	6863	3167	10	—	3157	2934	193	38	2
Jaffa "	50901	12083	—	2310	9773	10930	725	428	—
Ramleh "	33227	10153	19	—	10134	8653	1435	65	—
Gaza "	10707	7592	1	—	7591	6869	723	—	—
Majdal "	44155	8976	—	1936	7040	8815	161	—	—
Haifa "	9509	4758	5	136	4617	2577	1372	796	13
Acre "	7596	3774	259	36	3479	2802	832	83	57
Nablus "	31571	12824	103	—	12721	12750	74	—	—
Tulkarem "	14702	1950	143	—	1807	1887	63	—	—
Jenin "	9201	6712	102	1077	5533	6603	109	—	—
Baisan "	20458	6666	182	1919	4565	5 68	595	203	—
Safad "	22618	6354	16	2263	4075	5659	642	51	2
Nazareth Medical Inspection Room	2337	1998	1	—	1997	975	990	33	—
Tiberias " " "	3162	1632	11	360	1261	1063	217	352	—
Bethlehem " " "	433	226	—	5	221	109	114	3	—
TOTALS	291306	101901	924	10306	90671	87009	11237	3581	74

VOLUNTARY HOSPITALS—1932

Name and Location of Hospital	Bed Strength	Admissions					Deaths	Discharges	Daily Average in Hospital	Remarks
		Moslems	Christians	Jews	Unclassified and Other Religions	Totals				
JERUSALEM										
Ophthalmic Hospital of the Order of St. John of Jerusalem	45	1216	155	26	—	1397	—	1405	37.0	
St. Louis (French) Hospital	150	550	638	7	—	1195	42	1154	38.8	
Italian Hospital	60	254	149	12	6	421	—	427	15.2	
Rothschild (Hadassah) Hospital	135	13	9	4022	—	4044	285	3753	142.0	
English (Church Mission to Jews) Hospital	70	14	63	1235	—	1312	22	1293	49.0	
Shaare Zedek Hospital	53	8	3	938	—	949	55	878	30.0	
Mizgab Ladach Hospital	35	2	—	232	—	234	17	223	11.0	
New Bicur Cholim Hospital	74	3	5	1348	—	1356	62	1279	46.4	
Old Bicur Cholim Hospital	20	—	—	19	—	19	19	3	19.0	
Leper Hospital (International Moravian Society)	60	5	—	3	—	8	—	8	21.0	
Deaconness (German) Hospital	60	821	793	29	—	1643	74	1567	54.0	
Convalescent Home (Kupat Cholim) Motza	65	—	—	1010	—	1010	—	982	57.3	
BETHLEHEM										
French Hospital	80	212	521	1	—	734	35	700	31.0	
HEBRON										
Jerusalem and The East Mission Hospital	32	691	8	5	1	705	46	648	14.7	
JAFFA										
Church Missionary Society Hospital	57	—	—	—	921	921	43	885	26.8	
German Hospital	20	35	127	6	—	168	6	159	5.4	
French Hospital	90	860	188	39	—	1087	59	1022	35.2	

VOLUNTARY HOSPITALS, 1932 *(continued)*

Name and Location of Hospital	Bed Strength	Admissions					Deaths	Discharges	Daily Average in Hospital	Remarks
		Moslems	Christians	Jews	Unclassified and other Religions	Totals				
GAZA										
Church Missionary Society Hospital	63	—	—	—	495	495	22	477	17.8	
HAIFA										
Hadassah Hospital	46	4	—	1567	—	1571	64	1501	39.8	
German Hospital	30	256	259	314	9	838	34	813	22.3	
Italian Surgical Hospital	30	148	83	81	4	316	6	308	14.7	
NAZARETH										
Edinburgh Medical Mission Hospital	50	972	223	32	3	1230	59	1186	36.6	
French Hospital (Soeurs de Charité)	56	424	253	3	—	680	28	657	17.1	
AFULA										
Kupat Cholim Hospital	40	4	—	1081	—	1085	16	1085	43.8	
NABLUS										
Church Missionary Society Hospital	45	631	58	—	4	693	24	669	17.5	
TIBERIAS										
United Free Church of Scotland Hospital	60	—	—	—	1065	1065	39	1017	53.6	
SAFAD										
Hadassah Hospital	58	33	14	438	—	485	25	446	51.8	
TOTALS	1584	7156	3549	12448	2508	25661	1082	24548	948.8	

VOLUNTARY DISPENSARIES AND CLINICS — 1932.

Name of Dispensary or Clinic	Total Attendances	New Patients								Remarks
		Totals	By Disease			By Religions				
			Malaria	Eye Disease	Other Diseases	Moslems	Christians	Jews	Undefined and other Religions	
JERUSALEM										
Shaare Zedek Hospital	22092	3261	—	—	3261	276	43	2942	—	
Misgab Ladach Hospital	15118	8141	—	1169	6972	338	28	7775	—	
St. Louis (French) Hospital	31263	14728	223	3166	11339	6786	6562	1380	—	
Ophthalmic Hospital of the Order of St. John	97063	21350	—	21350	—	15754	3617	1979	—	
Rothschild (Hadassah) Hospital	81495	16440	5	3031	13404	140	138	16162	—	
Church Mission to Jews Hospital	38185	15864	1	2284	13579	427	386	15051	—	
Armenian Convent Dispensary	919	130	3	10	117	—	130	—	—	
Italian Hospital	6748	2351	—	—	2351	1264	656	431	—	
New Bicur Cholim Hospital	11984	3577	—	—	3577	—	—	3577	—	
Old Bicur Cholim Hospital	2533	2533	—	—	2533	—	—	2533	—	
Kupat Cholim Dispensary	57591	18371	—	262	18109	143	—	18228	—	
Moslem Polyclinic	8191	7608	84	78	7446	7445	148	15	—	
German (Deaconness)	24000	13050	—	190	12860	6605	3167	3278	—	
RAMALLAH										
Soeurs de St. Joseph (French)	3698	3440	—	2808	632	1626	1814	—	—	
BETHLEHEM										
French Hospital	23658	3993	—	2276	1717	2276	1717	—	—	
HEBRON										
St. Luke's (Jerusalem and the East Mission)	8447	3258	31	927	2300	3192	32	34	—	
Moslem Polyclinic	2459	2282	—	94	2188	2282	—	—	—	
Porath Joseph	3268	558	1	113	444	4	—	554	—	

VOLUNTARY DISPENSARIES AND CLINICS — 1932 *(Continued)*

Name of Dispensary or Clinic	Total Attendances	New Patients								Remarks
		Totals	By Disease			By Religions				
			Malaria	Eye Disease	Other Diseases	Moslems	Christians	Jews	Undefined and other Religions	
JAFFA										
Church Missionary Society Hospital	10407	5244	243	157	4844	—	—	—	5244	
Church of Scotland Dispensary	2874	2314	39	—	2275	885	31	1398	—	
French Hospital	35968	3829	16	1740	2073	3829	—	—	—	
St. George's Dispensary	4685	3204	—	26	3178	1338	1861	5	—	
Agudath Israel Dispensary	13229	3959	5	708	3246	1489	1	2469	—	
Hadassah Hospital	65147	12739	13	1858	10868	—	—	12739	—	
Kupat Cholim Dispensary	256264	65166	53	8984	56129	59	—	65107	—	
Jewish Medical Organization, Shenkin Str.	11552	3483	—	330	3153	—	—	3483	—	
Jewish Medical Organization, Yehuda Halevy Str.	35301	11507	—	1129	10378	—	—	11507	—	
GAZA										
Church Missionary Society Hospital	5020	2996	46	149	2801	2764	232	—	—	
HAIFA										
German Hospital	3467	2934	—	654	2280	1678	1002	243	11	
Italian Hospital	8634	3726	44	—	3682	1605	518	1554	49	
Hadassah Hospital	28443	7111	2	1854	5255	81	28	7002	—	
Kupat Cholim Dispensary	85395	72510	—	6571	65939	3064	1667	67779	—	
Soeurs de Charité (French) Dispensary	15453	2764	2	443	2319	1698	987	55	24	
Moslem Medical Clinic	9274	6749	261	324	6164	6422	306	21	—	
British Mission to Jews Society	14152	4006	22	205	3779	484	729	2789	4	
NAZARETH										
French Hospital	13788	12200	141	1768	10291	8409	3782	9	—	
Edinburgh Medical Mission Hospital	7847	4540	151	823	3566	3074	1426	37	3	
Austrian Hospice Dispensary	3955	3955	235	1524	2196	2205	1750	—	—	
NABLUS										
Church Missionary Society Hospital	8485	3390	170	536	2684	3390	—	—	—	
TIBERIAS										
Scots Mission Hospital	11259	3696	234	342	3120	—	—	—	3696	
Hadassah Dispensary	58902	9117	21	4236	4860	977	38	8102	—	
SAFAD										
Hadassah Hospital	24372	1608	14	24	1570	101	4	1503	—	
TOTALS	1172585	393682	2060	72143	319477	92110	32800	259741	9031	

TABLE OF PATIENTS IN GOVERNMENT, MUNICIPAL AND VOLUNTARY HOSPITALS — 1932.

Name of Hospital	British		Other Foreigners			Palestinians			Totals		
	Jews	Christians and others	Jews	Moslems	Christians and others	Jews	Moslems	Christians and others	Jews	Moslems	Christians and others
Misgab Ladach, Jerusalem	—	—	49	—	—	183	2	—	232	2	—
St. Louis (French), Jerusalem	—	4	4	5	86	3	545	548	7	550	638
Ophthalmic, Order of St. John, Jerusalem	—	1	—	—	—	26	1216	154	26	1216	155
Rothschild (Hadassah), Jerusalem	24	—	953	—	2	3045	13	7	4022	13	9
Church Mission to the Jews, Jerusalem	—	—	—	—	—	1235	14	63	1235	14	63
Ezrath Nashim, Jerusalem	—	—	18	—	—	18	—	—	36	—	—
Shaare Zedek, Jerusalem	10	1	217	—	—	711	8	2	938	8	3
Bicur Cholim (New), Jerusalem	1	1	98	—	—	1249	3	4	1348	3	5
Bicur Cholim (Old), Jerusalem	1	—	6	—	—	12	—	—	19	—	—
Italian, Jerusalem	—	2	7	15	118	5	239	35	12	254	155
German (Deaconess), Jerusalem	3	35	7	28	275	19	793	483	29	821	793
Convalescent Home, Kupat Cholim, Motza	—	—	—	—	—	1010	—	—	1010	—	—
French, Bethlehem	—	—	—	1	27	1	211	494	1	212	521
St. Lukes, Hebron	—	1	1	—	1	4	691	7	5	691	9
Church Missionary Society, Jaffa	—	1	—	—	3	←	917*	→	←	921*	→
French, Jaffa	—	1	14	10	28	25	850	159	39	860	188
German, Jaffa	—	2	—	—	125	6	35	—	6	35	127
Church Missionary Society, Gaza	—	5	—	—	—	—	482	8	—	482	13
German, Haifa	2	7	124	6	93	188	250	168	314	206	268
Italian, Haifa	—	2	1	2	22	80	146	63	81	148	87
Hadassah, Haifa	13	—	565	2	—	989	2	—	1567	4	—
Edinburgh Medical Mission Society, Nazareth	3	23	—	—	3	29	972	200	32	972	226
French, Nazareth	—	1	1	1	4	2	423	248	3	424	253
Kupat Cholim, Affula	2	—	285	—	—	794	4	—	1081	4	—
Scottish Mission, Tiberias	—	11	—	10	7	341	586	110	341	596	128
Hadassah, Safad	—	9	131	1	—	307	34	3	438	35	12
Church Missionary Society, Nablus	—	—	—	—	—	—	631	62	—	631	62
Total Voluntary Hospitals	59	107	2481	81	794	10282 ←	8150 plus 917*	2818 →	12822 ←	8231 plus 921*	3715 →
Government General, Jerusalem	1	193	14	39	20	105	1010	505	120	1049	718
Government British Section, Jerusalem	1	50	—	—	—	—	—	—	1	—	50
Government, Haifa	—	134	41	2	3	348	742	205	389	744	342
Municipal, Beersheba	—	—	—	—	—	2	83	2	2	83	2
Municipal, Jaffa	—	134	145	32	8	226	967	123	371	999	265
Municipal, Gaza	—	9	—	5	1	2	571	14	2	576	24
Township, Tel Aviv	3	—	2930	—	—	2707	3	2	5640	3	2
Municipal, Acre	—	—	1	3	—	6	327	85	7	330	85
Watan, Nablus	—	43	—	—	—	2	1130	18	2	1130	61
Government Mental, Bethlehem	—	—	3	—	—	3	—	4	6	—	4
Total Government and Municipal Hospitals	5	563	3134	81	32	3401	4833	958	6540	4914	1553
TOTAL ALL HOSPITALS	64	670	5615	162	826	13683 ←	12983 plus 917*	3776 →	19362 ←	13145 plus 921*	5268 →

* Total patients treated. Classification by religions not available.

7. Maternity and Child Welfare

There were 460 admissions to the Princess Mary Maternity Wards at the Government Hospital, Jerusalem, compared with 423 cases in 1931. Of these admissions, 23 were Jews, 231 Christians and 206 Moslems. 2 deaths of mothers occurred, giving a maternal mortality rate of 4.4 per 1000 live births. There were 17 still births and 6 deaths of infants and 452 live births.

17 midwives were trained during the year, 10 of whom were graduate nurses.

The district maternity service referred 56 complicated or abnormal cases to the maternity wards for delivery.

The district maternity and infant welfare centre in the old city of Jerusalem continues to expand and develop its work. There were 1966 ante-natal examinations of 171 cases booked. 268 ante-natal cases were referred to maternity hospitals or private midwives for special treatment or attention. There were 1854 attendances at the gynaecological clinic. 144 deliveries were attended to and practising midwives were assisted at 320 births. These figures, together with the admissions to the maternity section of the government hospital, indicate that government midwives attend to or assist in the delivery of 28% of the births occurring in Jerusalem town.

The number of infants on the register of the infant welfare centre is 458. Attendances at the centre were 19,962 during the year and 3213 visits were made by nurses to children's homes.

Work on similar lines is carried out by the government maternity and infant welfare service in Nablus. Forty-seven maternity cases were admitted to the Nablus hospital for delivery.

There are 16 infant welfare centres for the administration of which the department is directly responsible. In the case of three, the cost of maintenance is borne by the local authority. During the year the department also assisted two centres conducted by voluntary committees in Haifa and Jaffa.

The particulars of the work done by all infant welfare centres in the country is shown in the table on page 47.

The department has made arrangements for the further development of district maternity services in Jaffa and Haifa on the lines of those so successfully organised in Jerusalem and Nablus and for this purpose, the appointment of two additional superintendents of midwifery is being sanctioned.

INFANT WELFARE, 1932.

Location and Supporting Organization	Number of Infants cared for by Centre	Attendances of Infants at Centre	Visits by Nurses to Infants at home	Opened in
Government and Municipal				
Jerusalem, Government	444	19970	3213	1925
Ramleh, ,,	1408	15884	1922	1926
Nablus, ,,	1037	9310	7618	1926
Acre, ,,	253	933	446	1926
Gaza, ,,	927	4954	3883	1927
Hebron A. ,, and Supreme Moslem Council	337	6177	2125	1927
Hebron B. ,,	318	6251	1451	1927
Hebron C. ,,	218	2701	332	1931
Jifna, Government and Local Community	197	6074	2623	1928
Halhul, ,, ,, ,, ,,	225	1490	1236	1929
Baisan, Government	438	2355	4679	1930
Jaffa ,,	306	7319	2849	1930
Ramallah, Municipal	403	4285	4282	1925
Bethlehem, ,,	254	8624	2370	1926
Beersheba, ,,	117	125	963	1929
Jenin, Government	118	1008	1961	July, 1932
	7000	97460	41953	
Hadassah Medical Organization				
Jerusalem, Station A.	652	6573	2455	1922
,, ,, B.	1664	13549	5951	1924
,, ,, C.	1734	15542	5381	1923
,, ,, F.	423	4076	1238	1925
,, ,, G.	111	990	295	1928
Tel Aviv, ,, A.	1027	12241	2231	1927
,, ,, B.	391	4940	551	1927
Haifa ,, A.	753	9925	1311	1923
,, ,, B.	684	7602	1644	1926
,, ,, C.	140	3170	569	1926
,, ,, D.	69	975	109	1927
Rehovoth	175	2274	342	1924
Shaaraim	172	2442	974	1926
Rishon-le-Tsiyon	133	1644	420	1928
Shevat Tsiyon	73	703	508	1928
Petah Tiqva	441	5165	1400	1924
Mahne Yehuda	125	1612	1029	1925
Tiberias	605	6476	1472	1924
Yavniel	44	775	229	1928
Safad	147	80	21	1930
Nes-Tsiyona	90	872	217	1930
Kfar Sava	173	1296	18	1931
	9826	102922	28365	
Local Committees				
Jerusalem, American Colony Aid Assn.	729	9664	1142	1927
Jaffa, Committee of Ladies	367	6996	2751	1926
Haifa, Social Service and Infant Welfare Association	979	8496	7768	1925
Ain Karem, Miss Carey's Centre	249	2591	1068	1931
Women's International Zionist Organization				
Tel-Aviv, Carmel Street	926	13434	2873	1923
,, Nehemya Street	580	10907	1948	1922
,, Shabazi Street	723	11346	4173	1926
	4553	63434	21723	
GRAND TOTALS	21379	263816	91041	

8. Ophthalmic Service.

An additional ophthalmic clinic was opened at Jaffa. There are now seven special clinics maintained by the department in Beersheba, Jaffa, Gaza, Ramleh, Nablus, Tulkarem and Acre. Ophthalmic cases are also dealt with at the sub-district clinics at Majdal, Jenin, Safad and Baisan. At Tiberias the Scottish hospital and the Hadassah clinics provide for the treatment of eye disease in that town and sub-district.

The department's clinics are staffed by personnel who have undergone special courses of instruction in the Ophthalmic Hospital of the Order of St. John in Jerusalem, which also provides facilities for periodic refresher courses. The summer epidemics of acute ophthalmia are chiefly concentrated in the southern sub-districts of Ramleh, Majdal, Gaza, Hebron, Jaffa and Tulkarem, although in other sub-districts minor epidemics occur. This highly infective disease has long been recognized as the chief cause of blindness in Palestine, and in 1920, a travelling ophthalmic hospital was organised by the department and operated in the southern area under a specially engaged ophthalmic surgeon. On account of economy this travelling unit was replaced by fixed ophthalmic clinics in 6 and now 7 centres. The work of these ophthalmic clinics has continued to increase as follows :-

Year.	Attendances.	New Patients.	Attendances Acute Conjunctivitis.
1928	147,951	18,576	7474
1929	146,135	14,271	6186
1930	162,207	16,894	7355
1931	170,434	19,303	8579
1932	201,578	23,531	9938

The incidence per centum of acute conjunctivitis amongst patients attending was, therefore, 42.2%. The percentage of cases of acute conjunctivitis reporting for treatment of established corneal ulceration was 4%.

Ophthalmic treatment was accorded at other clinics to the following new patients :-

Government Dispensaries and Clinics	11778
At Non-Government Clinics	83463
At Government Schools	7528
Total	102769

Attendances at Government schools numbered 2,353,170.

Replies to question number 18 of the Census (1931) enumeration form revealed that the incidence of blindness in the southern district with a population of 304,532 was even greater than we had anticipated and showed the following incidence :-

Blind of One Eye.		Totally Blind	
Total	From Birth	Total	From Birth
8,534	47	3,462	78.

In order to verify these figures, the Warden of the Ophthalmic Hospital of the Order of St. John and Consulting Ophthalmic Surgeon to the Government spent a month in the villages where the incidence was greatest and corroborated the Census returns, and ascribed this unprecedented degree of blindness to epidemics of acute conjunctivitis in villages. He subsequently reported on the situation and at the request of Government put forward a scheme for dealing with this epidemic situation.

In essence his scheme recommended the re-establishment of a travelling unit but of a more mobile character, designed to move rapidly from village to village as epidemics occurred, the increase of stationary ophthalmic clinics by 2 in the southern district and 1 in the northern district, and the establishment of subsidiary tamurgis' clinics in 6 villages, to commence with, under the supervision of the medical officers of the stationary units. He recommended also the detailed record of all acute conjunctivitis cases requiring secondary operative treatment, in order that during the subsequent winter they might be dealt with by the medical officer of the travelling unit who would return to the ophthalmic hospital during the winter to deal with these cases.

He advocated the establishment of a training school in Jerusalem where village girls of marriageable age would receive 4 or 5 months training in hygiene and simple eye treatment in order that subsequently they might assist in dealing with and in reporting epidemics of acute conjunctivitis in their village.

The scheme as a whole will be commenced during the summer of 1933, and the training of girls, if their parents and prospective husbands can be prevailed upon to permit them to leave their villages, will be undertaken by the Order of St. John.

Improved sanitation of villages, in order to minimize the risks of infection was advocated.

SUMMARY OF OPHTHALMIC RETURNS — 1932.

Location	Total Attendances	Number of New Patients	Number Admitted to Hospital	Operations		Classification of Conditions found in New Patients.										
				Trichiasis	Other Conditions	Clear Lids	Acute Conjunctivitis	Acute Conjunctivitis with Corneal Ulceration	Trachoma	Trachoma with Corneal Ulceration	Corneal Ulcers other than above	Corneal Conditions other than Ulcers	Endophthalmia	Varia	Blind in both Eyes	Blind in one Eye
Beersheba	10330	439	1	1	30	102	139	2	323	26	1	18	6	22	4	10
Gaza	46576	4586	24	113	358	1509	1793	22	3077	263	29	545	447	1010	11	164
Ramleh	42602	6060	3	122	140	697	1367	153	5363	764	155	857	451	2263	65	424
Acre	23164	1906	24	35	75	636	915	—	1270	73	44	118	32	515	10	33
Nablus	54697	6230	12	26	29	2945	3608	129	3285	390	78	488	135	1170	20	157
Tulkarem	19736	3818	—	96	74	390	1934	86	3428	915	25	480	184	1391	27	176
* Jaffa	4473	492	—	—	—	106	182	12	386	74	9	48	9	126	—	17
TOTALS	201578	23531	64	393	706	6385	9938	404	17132	2505	341	2554	1264	6497	137	981

* Opened in November.

9. Lunacy.

The general situation as regards accommodation afforded to mental cases in institutions was improved to the extent of 20 beds.

The Swedish hospital building at Bethlehem was taken over and adapted for use as No. 2 Mental Hospital for 50 men. The women's accommodation at the No. 1 Mental Hospital was expanded at the expense of that of the men so that a final provision for 48 female mental cases and 80 male mental cases was achieved.

Thirty non-paying cases from the private Jewish mental hospital were taken over by the Government and 20 additional cases taken in from the waiting list of 116 severe cases. There are at present some 88 severe cases at large.

It was unfortunate that it became necessary to carry out this expensive temporary and makeshift expansion in a hired building on account of the indefinite deferment of the larger building scheme originally approved. A modified and less expensive scheme was drawn up by the Department of Public Works in consultation with the Department of Health.

The following was the situation as regards patients in institutions and awaiting admission.

	Arabs	Jews	Total
Government Mental Hospitals	48	53	101
Ezrath Nashim Home	—	48	48
Awaiting Admission	51	37	88

During the year 2 patients died in government hospitals, and 3 in Ezrath Nashim Home.

The classification of patients admitted during the year was as follows:-

	Govt. Mental Hospital.	Ezrath Nashim Home.
Psychasthenia.	1	1
Mania, Depressive Group	3	4
Melancholia State	1	1
Paranoia	—	1
Dementia Praecox	3	23
Alcoholic Insanity	1	—
General Paralysis	—	2
Other Organic Insanities	1	4
	10	36

Hospital	Nominal Bed Strength	Admissions				Deaths	Dis-charges	Daily Average in Hospital
		Moslems	Christians	Jews	Others			
Government Mental Hospital No. 1.	80	—	4	27 (b)	—	2	44 (c)	80.1
„ „ „ No. 2.(a)	51	8(d)	9(d)	26 (d)	—	—	—	25.0
Total	131	8	13	53	—	2	44	105.1
Ezrath Nashim Home	56	—	—	36	—	3	56 (e)	65.3
TOTALS	187	8	13	89	—	5	100 (e)	170.4

(a) Opened on 8th December, 1932.

(b) 21 transferred from Ezrath Nashim Home.

(c) 37 transferred to Government Mental Hospital Number 2.

(d) 8 Moslems, 9 Christians and 20 Jews transferred from Number 1 and 6 from Ezrath Nashim.

(e) 21 transferred to Government Mental Hospital Number 1 and 6 to Government Mental Hospital Number 2.

MENTAL HOSPITALS—GENERAL STATISTICAL TABLE.

		Number admitted during 1932	Daily average number during 1932	Number of Attendants				Discharged			Number of patients who died during 1932	Average stay of those		
				Resident		Non-Resident								
				Employed in attendance on the patients	Employed as servants or only partially as attendants	Employed in attendance on the patients	Employed as servants or only partially as attendants	Cured	Relieved	Not improved		Died in 1932	Discharged in 1932	Remaining at end of 1932
												Days	Days	Days
Government Mental Hospital Number 1, Bethlehem	Male	12	47.8	11	4	—	4	—	—	38	2	2,159	1,232	1,729
	Female	12	32.1	13	5	—	4	3	2	1	—	—	402	1,498
Government Mental Hospital Number 2, Bethlehem	Male	43	24.9	11	3	—	4	—	—	—	—	—	—	25
	Female	—	—		1	—	4	—	—	—	—	—	—	—
Ezrath Nashim Home Jerusalem	Male	11	22.0	3	1	2	1	2	6 (a)	15 (b)	—	—	1,787	1,262
	Female	25	42.0	2	—	9	6	3	11	19	3	175	1,671	1,216
TOTALS		103	—	40	14	11	23	8	19	73	5	—	—	—

(a) Includes 1 case transferred to the Government Mental Asylum, Bethlehem.
(b) „ 26 cases „ „ „ „ „ „ „

10. School Medical Service.

The number of children in government and non-government schools is given in the following table:—

	Number of Schools	Number of Boys	Number of Girls	Number of Teachers
Government Schools in Towns	54	6886	4499	427
Government Schools in Villages	251	12972	680	356
Non-Government Schools.	675	34699	26136	3062
	980	54557	31315	3845

The government school medical service operates primarily for all government schools but is available for non-government schools which make application for the benefit of this service.

About 25,000 children in government and non-government schools are under supervision by the service. The Hadassah Medical Organization carries out a similar service for a corresponding number of children in schools of the Jewish community.

Apart from the school medical service, the department makes a periodic sanitary inspection of all registered schools in the country. A schedule of sanitary improvements required is furnished to the manager or proprietor and to the district inspector of education. The plans of all new schools are submitted to the department for approval.

A draft education ordinance was published as a bill during the year and will be enacted early in 1933. The ordinance provides powers of entry to Medical Officers of Health for the purpose of sanitary inspection. The High Commissioner may, on application of the Director of Education, order the closure of a school in which the sanitary conditions are detrimental to the health of the pupils or the teaching staff.

The work of the school medical service is tabulated below:—

	Town Schools	Village Schools	Total
Lecture to Teachers:			
Number of Hygiene Lectures by Medical Officers to Teachers	23	55	78
Number of Teachers Attending Lectures	461	125	586
Medical Inspection of Pupils:			
Number of children medically examined	9087	8219	17306
" with trachoma	3368	5869	9237
" with other eye disease	531	376	907
" with defective vision	265	126	491
" verminous head or body	165	116	281
" 4 or more teeth badly decayed	13	7	20
" with enlarged spleen	28	265	293
" with heart disease	9	9	18
" with lung affections	13	15	28
" tuberculous disease	—	3	3
" mentally defective	2	1	3
" vaccinated against smallpox	2280	1508	3788
Ophthalmic Treatment.			
Number of attendances of children for treatment of trachoma etc. by teacher or school nurse	872,010	1,481,160	2,353,170

The percentage of trachoma in children medically examined was 37% in town schools and 71% in village schools, compared with 41% and 70% in 1931.

1097 children received treatment for malaria. General cleanliness of the school children is improving. The percentage of children found with vermin of the body or head was less than last year.

Five school nurses attended a refresher course of instruction in ophthalmic work at the Ophthalmic Hospital of the Order of St. John in Jerusalem.

The number of attendances of children for treatment of trachoma by the school nurse, teacher or doctor was 2,353,170, approximately the same as last year.

11. Railway Medical Service.

(a) Personnel.

The railway medical staff for 1932 remained identical with that of 1931 and was made up as follows:—

1. The Senior Medical Officer (Railways) stationed at Haifa.
2. Medical Officer to the Sinai Military Railways, stationed at Kantara.
3. Clerk-Dispenser—attached to the Senior Medical Officer's office.
4. Six Railway Medical Orderlies at Haifa, Affula, Lydda, Kantara and Nur es-Shams.

From June to the last week of October, the Senior Medical Officer (Railways) was deputising in Jerusalem for the Surgeon Specialist who was on vacation leave. The administrative duties of the S.M.O. (Railways) were performed in his absence by the Senior Medical Officer, Haifa.

Stringent economy prevented any large scale measures of improvement to housing or sanitary arrangements of railway premises, but certain improvements were effected in the course of the year.

Occasional inspections of the line were made by S.M.O. (Railways) and in October the Hejaz Railway to Amman was inspected. Since June of the year under review the line from Kantara to Lydda and Tel Aviv was inspected and reported on monthly by the Medical Officer, Kantara.

The work of the medical orderlies was maintained at a satisfactory level.

(b) First Aid Equipment.

The first aid equipment was maintained as in previous years, the whole equipment being reported on monthly and deficiences replenished as required. The ambulance coach was stationed at Lydda. It is hoped that during the next financial year it will be found possible to erect a screen to protect this coach from the sun.

Additions to the first aid equipment were effected at Amman and in trains from Amman, and at Tel Aviv and Bittir stations.

(c) Incidence of Sickness.

The total number of railway personnel that underwent treatment at the clinics of medical officers amounted to 3886, and was slightly greater than in 1931. This number was contributed from the various branches of the railway as follows:

Chief Engineer	Running Section	Supt. of the Line	Chief Mechanical Engineer	Accounts	General Manager	Stores	Senior Medical Officer
1070	997	804	752	164	9	89	1

The total time "off duty" granted from the clinics amounts to 10,276 days giving an average per man sick of 2.64 days. These figures bear much the same proportion to each other as in the previous year.

The attendances for minor ailments and injuries at the dressing stations of the medical orderlies total 23,957.

Admissions to Haifa hospital numbered 101 and involved 633 days absence from duty, additional to the figures quoted above.

(d) Drugs, Dressings, etc.

From the 1st of January, 1932, all medical stores were supplied by the Railway Stores. The costs for the year, January 1st, 1932, to December 31st, 1932, amount to the following:—

(a)	Drugs and Appliances ...	£P.112.989
(b)	General Stores	£P. 4.902
(c)	Stationery	£P. 3.782

(e) New Railway Workshops, Haifa.

The workshops were not completed by the close of the year but are expected to be ready for use on the 1st of April, 1933.

The latrines and urinals, after some minor alterations to the septic tanks on the advice of the Sanitary Engineer, Department of Health and of the Municipal Sanitary Surveyor, Haifa, now work very satisfactorily. As pointed out in last year's report, the present number of latrines is likely to be found inadequate when the full complement of men is employed in the shops.

The mosquito-breeding in the neighbourhood of the shops is now thoroughly controlled and very few mosquitoes have been noticed in the past season.

The water supply at the workshops has been tested bacteriologically every week and usually attains the standard of no fermentation in 10 c.c. and no B. coli in 10 c.c.

An excellent little dressing station, constructed of stone and concrete has been built for the medical orderly's clinic and the housing of the first aid equipment.

(f) Kantara and Sinai Military Railway.

The water supply along the Sinai Military Railway line is still the subject of adverse comment. Most of the stations rely on cisterns laid on ground level with openings on the upper surface. These are filled from water-trains about once weekly. There is no doubt that the only proper way of dealing with the matter is by the construction of concrete ground cisterns with service pumps to smaller raised tanks with tap delivery.

The new syphon at Kantara, finished early in 1932, preserved the continuance of a good supply of water.

Even with the removal of a considerable number of men from Kantara on the opening of the new workshops at Haifa, there will still remain in the neighbourhood of 300 railway personnel stationed at Kantara. This fact, together with the necessity of having a medical officer available in case of accidents on that end of the line, and also to effect quarantine control at Kantara, still make it advisable for the railways to maintain a medical officer at Kantara.

(g) Inspection of Trains.

There were more intensive inspections of passenger coaches in the course of the year and the complaints from this department as to the poor standard of cleanliness maintained resulted in an undoubted improvement in the cleanliness of the coaches, especially 3rd class, and to the latrines on the trains.

12. Police and Transjordan Frontier Force Medical Arrangements.

The health of the Police and Frontier Force was satisfactory.

There were 349 admissions to hospital from the British section of the police force with an average stay in hospital of 8 days. From the Palestine section there were 320 admissions with 7 days average stay in hospital.

145 British police were sanctioned dental treatment by medical boards.

Progress was made with the construction of a sick bay at the British Police Depot. The S.M.O. of the Frontier Force reports that there were fewer attendances for medical treatment than in 1931. 518 cases were admitted to hospital compared with 472 in 1931. Of these, 485 were treated in Frontier Force hospitals. There were 40 cases of malaria of which 16 were primary and 24 secondary. No primary cases of malaria occurred in Zerka camp where the antimalarial work in the Wady Zerka was satisfactorily maintained.

13. Prison Medical Service.

The general health of prisoners has been good. The average prison population was 2463. There were 266 admissions to Government and Municipal hospitals with an average of 14 days treatment each.

There were 19 admissions in the tuberculosis ward of Acre prison and 17 discharges, 10 of which were discharged as cured and 7 on completion of sentence. There were 6 admissions to the criminal lunatic section of the prison hospital, 4 discharges and 1 death. A new diet scale for prisoners has been introduced providing for a daily variation in menu. The composition and energy value of the daily menu was the subject of careful study by the department in order to ensure maximum economy while maintaining adequate energy values and a properly balanced diet. The new scale has proved very satisfactory, a considerable economy has been directly obtained, the variation in menu is appreciated by prisoners, there is little or no waste and the nutritive and energy values of the ration scale have been maintained.

Considerable sanitary improvements were effected at the Central Prison, Jerusalem. The premises were not, however, constructed for prison purposes and in consequence cannot be regarded as satisfactory. Overcrowding is also a matter for serious consideration.

At Acre prison new workshops have been constructed and an excellent prison hospital ward is in process of completion.

Improvements to Jaffa lock-up were effected comprising a new women's section and accommodation for a clinic.

14. Training in First Aid.

A considerable impetus was given to the training in 1st aid of the British and Palestine police force. It is desired to maintain opportunities for effective first aid assistance to the public by the police throughout the country. In several instances of severe injury the value of this training was demonstrated. Competitions between sections of the police were held during the year. Medical officers of the department also gave courses of instruction in first aid to employees of the Department of Health, to railway personnel and to volunteers. The course followed is that prescribed by the St. John Ambulance Association.

The results of examinations were as follows :—

	Number of Candidates	Certificates			Voucher	Label
		Passed	Failed	Not Examined		
British Section, Palestine Police	73	64	7	1	1	—
British Officers, ,, ,,	14	13	—	—	1	—
Other Personnel, ,, ,,	105	86	19	—	—	—
Total Palestine Police	192	163	26	1	2	—
Palestine Railways (including Sinai Military Railway)	36	29	7	—	—	—
Dept. of Health, Palestine	8	6	1	—	—	1
Dept. of Public Health, Transjordan	2	1	1	—	—	—
Other Departments	4	3	—	—	—	—
TOTALS	242	202	36	1	2	1

15. The Medical Commission.

The Central Medical Board carried out 64 examinations during the year of which 8 were to determine the physical fitness of candidates for service, 32 in connection with applications for sick leave, 16 for extension of sick leave, 5 for invaliding from the service, and 5 for special treatment and estimation of disability.

The 18 District Medical Boards carried out 2947 medical examinations. 872 of these examinations were of candidates for employment in the police force.

As there is no dearth at present of suitable recruits for the force, an arrangement was made with the Department of Police that only candidates who are ascertained by the recruiting police officer to attain the prescribed standards of height and chest measurement would be sent forward to District Medical Boards for medical examination in future. Of police recruits examined during the year, 23% were rejected as not attaining the physical standards prescribed.

16. Medico-Legal Examinations and Reports.

There was little change in the amount of work required of medical officers for medico-legal purposes.

The number of investigations made was 3823 compared with 3903 in 1931. Evidence was given in courts on 1011 occasions as compared with 801 occasions last year. 384 post-mortem examinations were performed and reports submitted as compared with 396 in 1931.

17. The Practice of Medicine, Pharmacy, Dentistry and Midwifery.

At the end of the year there were 658 doctors, 214 dentists, 192 pharmacists and 333 midwives licensed to practise in Palestine.

During the year, the new licences granted were 61 to doctors, 8 to pharmacists, 11 to dentists and 19 to midwives. In addition, 1171 unqualified dayahs were practising midwifery, mostly in villages. These dayahs were registered by the department in 1929 for the purpose of keeping control over their activities, and their practice is mainly limited to village areas where the services of a licensed midwife are difficult to obtain.

EXAMINATIONS BY MEDICAL BOARDS — 1932.

	Examinations as to Fitness for Service											Special Miscellaneous examinations	TOTALS
	Government Officials and Employees other than Police				Police								
					Men Serving				Recruits				
	Fit for permanent service	Fit for temporary service only	Unfit for any service	Total	Fit for permanent service	Fit for temporary service only	Unfit for any service	Total	Fit for service	Unfit for service	Total		
Central Medical Boards	7	1	—	8	2	—	—	2	—	—	—	54	64
Jerusalem District Medical Boards	151	1	14	166	66	1	10	77	210	97	307	719	1269
Jaffa District Medical Boards	139	—	14	153	71	—	7	78	196	35	231	335	797
Haifa District Medical Boards	133	1	21	155	103	—	20	123	124	41	165	159	602
Samaria District Medical Boards	67	6	9	82	32	—	2	34	111	18	129	34	279
TOTALS	497	9	58	564	274	1	39	314	641	191	832	1301	3011

The trienial revision of the list of licensed practitioners was completed during the year. As a result of this revision the licences of 72 doctors, 15 dentists, 6 pharmacists and 31 midwives were cancelled the holders no longer being in practise in the country.

Seven new pharmacies were opened during the year and two were closed. The total number conducting business at the end of the year was 116.

The revised regulations published last year were satisfactorily enforced. The principal conditions introduced under these regulations were in respect of the size, the division of the pharmacy and the arrangement and manner of storage of the drugs.

Town water supply wherever available and drainage with proper arrangements for washing have to be installed in every pharmacy.

The quality of drugs in pharmacies greatly improved and samples from stocks and prescribed medicines dispensed were taken regularly for analysis.

Thanks to the careful supervision of the Inspector of Pharmacies who combines these duties with the supervision and regulation of the trade in dangerous drugs as required under the International Opium Convention, and to the co-operation of the pharmacists, a satisfactory standard of equipment, arrangement and maintenance of these establishments has now been attained and compares very favourably with European countries.

The profession, however, has been going through a period of depression during the past few years which is attributed partly to excessive competition resulting from too many pharmacies on one hand and the large number of Government and charitable institutions on the other, and partly to the diminishing amount of dispensing resulting from the expansion of trade in imported proprietary and patent medicines.

Another aspect of work done which has not hitherto been mentioned in previous reports is the great improvement achieved in the village clinics to which small dispensaries are attached. There are over 100 of such clinics in the country, conducted by Kupat Cholim and the Rural Sick Benefit Fund. Their object is to provide the local population of the Jewish colonies with medical treatment and medicines. A special pharmacopoeia has been prepared for them and they are required to comply with certain regulations. They are inspected regularly and the standard attained is gratifying.

An examination for assistant pharmacists under Public Health (Pharmacy) Ordinance, 1928, was held in March. Two local pharmacists assisted the department by acting as examiners. Out of 14 candidates who presented themselves for the examination 7 failed.

18. International Opium Convention.

71 Certificates were granted for the importation of dangerous drugs. The exporting countries were England, Germany, Switzerland, France and Italy. Imports were as follows :-

Opium medicinal	2200	grammes
Opium in the form of preparations	4460	"
Morphine in the form of salts and preparations	1930	"
Heroin and the hydrochloride	750	"
Cocaine in the form of salts and preparations	6342	"
Cocaine in preparations containing more than 0.1% of cocaine made direct from the leaf	165	"
Pantopon and preparations	386	"
Dicodid and preparations	160	"
Eucodal and preparations	120	"
Dilaudid and preparations	0.75	"
Extract of canabis indica	25	"

In December all licensed pharmacists rendered a return of the anounts of dangerous drugs they had dealt in during the year and gave their estimated requirements for the ensuing year.

Seven reports were forwarded to the Permanent Central Opium Board as follows :-

4 reports showing quarterly expenditure in dangerous drugs, 1 report giving the estimated annual requirements, 1 report of quantities of dangerous drugs held by wholesale dealers in drugs and 1 general report.

During the year an amendment was made to the Dangerous Drugs Ordinance 1925-1928 to incorporate in the legislation the recent recommendations of the Opium Advisory Committee of the League of Nations and by His Majesty's Government, increasing the penalties to be imposed on illicit traffickers in dangerous drugs, Acetyldihydrocodeinone (Acedicone) its salts and preparations were added to part 2 of the Schedule of the Dangerous Drugs Ordinance.

There is little evidence of drug addiction in Palestine, but hashish is smoked by a few from among the lower classes.

NUMBERS OF DOCTORS, PHARMACISTS, DENTISTS and MIDWIVES — 1932.

			Sex	Nationality																																		Totals	Grand Totals
				American	Armenian	Austrian	Australian	British	Bulgarian	Canadian	Chinese	Czecho-Slovak	Dutch	Egyptian	Estonian	French	German	Greek	Hijaz	Hungarian	Italian	Lettish	Lithuanian	New-Zealand	Palestinian	Persian	Polish	Roumanian	Russian	Spanish	Swedish	Swiss	Syrian	Transjordan	Turkish	Ukrainian	Yugo-Slav		
Medicine	Licences Granted	Prior to 1932	M	9	8	15	—	30	4	1	—	7	—	2	1	4	30	6	1	2	3	1	10	1	145	1	35	8	74	1	1	1	44	1	14	4	1	465	
			F	4	—	1	—	6	2	—	1	1	—	—	—	—	4	—	—	—	—	—	—	—	22	—	17	4	70	—	—	—	—	—	—	—	—	132	
		During 1932	M	2	—	—	—	5	—	—	—	—	—	1	1	—	4	—	—	1	1	2	2	—	12	1	9	—	—	—	—	—	2	1	—	1	—	45	
			F	—	—	—	—	1	—	—	—	1	—	—	1	—	6	—	—	1	—	1	—	—	2	—	2	1	—	—	—	—	—	—	—	—	—	16	658
Pharmacy	Licences Granted	Prior to 1932	M	3	10	4	1	1	2	1	—	2	—	1	—	1	5	3	—	—	—	1	2	—	60	—	8	3	18	—	—	—	22	—	5	4	—	157	
			F	—	—	1	—	3	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	—	10	—	4	1	6	—	—	—	—	—	—	—	—	27	
		During 1932	M	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	1	—	—	—	—	—	—	—	—	5	
			F	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	3	192
Dentistry	Licences Granted	Prior to 1932	M	5	3	—	—	—	—	—	—	—	—	3	1	—	4	—	—	1	—	—	2	—	21	—	4	—	14	—	—	1	2	—	2	—	—	63	
			F	2	—	—	—	—	—	—	1	—	—	—	3	—	—	—	—	—	—	2	8	—	26	—	38	7	50	—	—	—	—	—	—	3	—	140	
		During 1932	M	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	1	—	—	—	—	—	—	—	—	—	6	
			F	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	—	1	—	—	—	—	—	—	—	—	5	214
Midwifery	Licences Granted	Prior to 1932	M	4	5	3	—	18	—	—	—	1	—	2	—	2	10	1	—	—	—	—	4	—	165	—	25	3	46	—	1	1	12	—	5	6	—	314	
		During 1932	F	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12	1	1	—	—	—	—	—	2	1	—	—	—	19	333

IV. SANITARY ADMINISTRATION.

1. Water Supplies.

The rainfall for the winter season was 320 mms. (average of 38 stations). For three years the annual rainfall has been below the average for the past 20 years (540 mms. mean of 7 stations), and with an increasing population the difficulty of obtaining a minimum supply for domestic purposes in the highland districts of the country is presenting a serious problem.

Nablus town with an adequate supply in quantity has a most unsatisfactory distribution system of ancient construction rendering the supply liable to gross contamination. A scheme for reconstruction of the system was approved by the Secretary of State during the year. The funds for execution of the scheme are being found out of a loan granted by a bank to the Municipality.

The situation in Jerusalem town was most serious. Owing to the low rainfall, the water collected in the storage reservoirs of Solomon's pools was only 12,000,000 gallons. This was augmented by delivering to the reservoirs surplus water pumped from the Ain Farah springs. The Ain Fawwar spring failed entirely in August and the Arrub early in September.

In anticipation of failure of existing supplies, emergency measures had again to be undertaken. The supply to consumers was curtailed from once every two days to once every four days in June, once every five days in July and once every six days in August. The pump line from Ain Fawwar was extended to Ain Kelt, and an additional 170,000 gallons daily became available from this source about the end of August when it was possible to resume a supply every second day to consumers.

Further progress was made in the matter of the Ras-el-Ain scheme. The holders of the Ottoman concession for the water supply of Jerusalem were formally notified that the concession had lapsed. A survey was completed of the route for the pipeline to Jerusalem and technical details and estimate of cost submitted to the Colonial Office for examination.

A new service reservoir was under construction in Jerusalem during the year.

Jaffa Municipal Council increased its supplies by sinking an additional bore. Proposals are in hand for extension of the distribution system. A new bore was also sunk in Tel Aviv Township area for the northern and newly developing quarter of the town.

Ramleh town continues to make improvements to its system. A new bore was sunk in well number 2 with satisfactory results and new pumps installed operated by electricity. Plans are in hand for a new service reservoir.

The scheme for the improvement of Majdal supply will be put in hand early in 1933. Funds are available.

Gaza Municipality have sunk a new well and installed an engine and pump and are proceeding with the construction of a new service reservoir.

A scheme for the improvement of Khan Yunis supply was prepared but work is delayed on account of the lack of funds.

Haifa town still lacks a main supply. Though the proposal to utilise the Kabri sources was put forward many years ago, every alternative is being thoroughly explored. Meanwhile, except for small distribution schemes from three or four private wells within the Muncipal area, the town remains without an adequate water supply.

The Department made recommendations for the improvement of Safad town supply which is very limited. Recommendations were also made for improvements in the supply of Hebron and Baisan towns.

During the year a survey was made of the water supplies available in villages throughout the country and estimates of expenditure required to improve these supplies both in quantity and quality. A schedule of improvements of village supplies in the various districts, estimated to cost approximately £P.40,000, was prepared and submitted for consideration to District Commissioners.

Improvements were carried out in 107 villages and colonies totalling in value approximately to £P. 10,340. These funds were provided by villagers, the Jewish colony committees or by individuals.

2. Sanitary Engineering Section.

(a) General.

There was a great increase of building activity particularly in Haifa and Tel Aviv towns. In Jerusalem, building activities were hampered by the shortage of water but projects were pushed ahead in the latter part of the year.

The sanitary installations of all new constructions in town planning areas are under close supervision and a high standard has now been attained. The sanitary section continued to assist technical educational institutes. A syllabus of training in plumbing and sanitary engineering was furnished to the Y.M.C.A. technical school in Jerusalem and the Haifa Technical Institute.

(b) Water Supplies.

The section reviewed and advised on the technical aspects of all the major projects of improvement and development referred to above. Standard plans of methods of protection of village water supplies, wells, springs and cisterns were drawn up and circulated to districts for guidance.

(c) Sewerage Schemes and Drainage Disposal.

Jerusalem. Plans for the drainage of the Nahlat Zion quarter were reviewed. The Department was in consultation with the Municipal Engineer on the matter of the drainage scheme for the south-west portion of the town.

Jaffa and Tel-Aviv. Plans for the drainage of the Neve Shaanan, Merkaz Miskhari and Menshieh quarters were reviewed.

Advice was given in the matter of the extension of the Bassa sea outfall in view of the projected extension of the drainage line to take sewage from the Commercial quarter, Tel Aviv.

Safad. A drawing was prepared for the further extension of street sewers in this town, and the Municipality advised on the proper maintenance of the sewers installed last year.

The Majdal drainage scheme again came up for consideration and modification.

(d) Public Establishments.

The plans of a large variety of proposed establishments were reviewed. Amongst the more important were the thermal bath establishment, El-Hamme; thermal bath establishment, Tiberias; Kallia restaurant and bathing establishment, Dead Sea; soap factory, Tel Aviv; Tnuva dairy premises, Jerusalem, Jaffa and Haifa, and a public market, Tiberias.

A large number of plans of public and private institutions were reviewed and advice given upon sanitary and hygienic requirements, including the proposed Police Barracks, Blind Institute, Tamud Torah School, Hebrew University, Slaughter-houses Beit Jala and Hebron, and the Scottish Mission Hospital, Tiberias (extension).

(e) Levant Fair Tel Aviv, 1932.

Work was undertaken in connection with the Departmental exhibit at the Levant Fair. Models of various sanitary fittings and installations were prepared suitable for demonstration and explanation to the public.

3. Municipal Sanitary Services.

Jerusalem. Work on the main sewer for the western portion of Jerusalem commenced in July and progressed satisfactorily during the year. A representative of the Department serves on the drainage advisory committee of the Municipality.

Owing to objections raised to the sewer being carried through the Moslem cemetery, a diversion of the line has had to be adopted which, unfortunately excludes a portion of the area which otherwise could have been served by this sewage line.

The construction of the new slaughter house for Jerusalem progressed satisfactorily. The new Meldrum destructor was completed and brought into operation. Scavenging of main streets and thoroughfares was satisfactory, though the less frequented streets require more regular attention.

Jaffa. Streets sewers and drains were extended in several localities. The work involved some 1400 metres of drainage lines. The Council have in view, subject to funds being available, the construction of the Ajami main sewer, the Bassa sewer, and improvement of the sea outfall and the Salameh sewer with laterals.

The extension of the scavenging service to outlying quarters of the Council area has been undertaken. The scavenging of the town proper was satisfactory.

Tel Aviv. The drainage of Sheloush Street was completed. Plans of drainage of Neve Zedek, Neve Shalom and Mahne Yehouda quarters were prepared.

Scavenging in Tel Aviv is capable of improvement by the removal of house refuse daily throughout the area.

Refuse disposal of the Jaffa—Tel Aviv area is unsatisfactory. At the suggestion of the Department, the Councils are considering joint action to construct a refuse disposal plant which will serve both towns.

Haifa. Satisfactory progress is also recorded in Haifa municipal area. Some 5400 metres of underground drainage to new or existing sewers were completed. While removal of household refuse and its disposal is efficiently carried out, improvement is required in the methods of storing by householders pending removal by the scavenging service.

The temporary sewage disposal line discharging outside the harbour basin operated satisfactorily. The construction of the main collector and outfall will be undertaken when the area of land reclaimed as a result of the harbour works is laid out for development.

Local Councils. In the smaller council areas scavenging services are carried out with a varying degree of efficiency.

4. Village Sanitation.

Sanitary conditions in the majority of villages are primitive. Much work has been done, however, at the instigation of Medical Officers, mainly to secure the removal of refuse dumps from the entrance of villages to the fields. The installation of bored hole latrines was undertaken in Jaffa sub-district. Over 500 latrines were installed and a programme for the extension of this work is in hand. The maintenance of proper sanitary conditions in temporary camps and new settlements is unsatisfactory. Proposals for the amendment of the legislation controlling the establishment of these new settlements have been submitted to Government.

5. Trades and Industries.

The number of premises and trades controlled under the Regulation of Trades and Industries Ordinance increased from 14,554 in 1931 to 14,810 in 1932. Special conditions for places of public entertainment and for public stables were issued during the year.

Provisions are being made for the more effective control of hawkers in which the police will cooperate.

The petroleum regulations are under revision.

Steps were taken to control the quality and designation of butter, samneh and artifical butter (margarine) by the issue of an order under the Customs Ordinance. The order requires that articles imported under these designations shall comply with recognised standards similar to those applied to products manufactured within the country.

A draft ordinance entitled the Public Health (Regulations as to Food) Ordinance, to enable regulations to be made for the prevention of adulteration and false marking of foodstuffs was prepared by the Department and submitted to Government for consideration.

V. RELIEF

The three orphans towards whose maintenance a contribution was made from departmental credit reached the age of 16 years on June 1st, from which date their maintenance was discontinued.

NUMBER OF TRADES AND INDUSTRIES IN PALESTINE LICENSED DURING THE YEAR 1932.

Nature of Trade or Industry and Classification in the Schedule under the Trades & Industries Ordinance, 1927.	SUB-DISTRICT OF																		TOTALS
	Jerusalem	Ramallah	Bethlehem	Hebron	Beersheba	Jaffa	Tel Aviv	Ramleh	Gaza	Majdal	Haifa	Acre	Nazareth	Nablus	Tulkarem	Tiberias	Safad	Jenin	
Class I. A.																			
1. Hawkers etc. (including water carriers)	439	44	51	4	26	71	99	23	49	10	646	46	330	26	48	174	92	43	2221
2. Bakeries, public ovens, bread and bakers' shops	103	8	3	32	4	75	107	24	15	8	77	15	15	24	11	54	20	5	600
3. Butchers' shops and tripe shops	155	14	31	16	6	35	120	18	15	23	91	15	34	21	13	29	19	3	658
4. Cold storage establishments	1	—	—	—	—	—	2	—	—	—	—	—	—	—	—	1	—	—	4
5. Confectionery, sweetmeat, jam and preserved fruit establishments (including pastry shops)	8	1	—	2	3	17	15	13	9	1	18	16	2	27	2	5	3	1	143
6. Fish frying shops	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	2
7. Fish shops	14	—	—	—	—	4	30	1	2	—	15	4	4	1	—	10	—	—	85
8. Flour and corn mills	18	10	7	14	5	10	8	—	4	9	10	8	6	2	—	9	2	8	130
9. Grain and cereal shops	30	4	9	23	33	44	35	19	55	2	72	13	10	24	14	13	3	—	403
10. Groceries, flour stores and shops for the sale of vegetables and fruits	1025	143	100	176	77	485	686	200	252	128	425	155	144	281	126	279	152	25	4859
11. Ice cream manufacturers, shops and stores	4	—	—	1	—	—	4	—	—	—	4	—	—	—	2	3	1	1	20
12. Macaroni factories	1	—	—	—	—	—	2	—	—	—	1	—	—	—	—	—	—	—	4
13. Milk, butter, cheese, and dairy produce shops	8	—	—	—	—	4	43	—	1	—	15	—	4	12	—	6	2	—	95
14. Oil mills and oil stores (other than mineral oil stores)	17	52	9	9	—	2	11	25	5	1	3	6	3	6	—	—	—	6	155
15. Pickle factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
16. Poultry Shops	45	—	—	—	—	—	35	—	—	—	2	—	—	—	—	—	—	—	82
17. Preserved fish depots	1	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	4
18. Public kitchens	2	—	—	—	—	—	1	—	14	—	—	32	—	—	—	—	—	—	49
19. Aerated water factories	6	—	—	—	—	3	8	1	—	—	4	1	2	—	—	—	1	—	26
20. Artificial butter factories	3	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	7
21. Factories for canning, curing or preserving meat or fish (including sausage factories)	3	—	—	—	—	4	5	—	—	—	5	—	—	—	—	—	—	—	17
22. Ice factories and ice storage	7	—	—	—	—	6	8	—	1	—	11	2	2	1	—	3	—	—	41
23. Sugar refineries and factories and molasses factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24. Public markets (excluding horse and cattle markets)	4	—	—	—	—	—	1	—	—	—	—	—	2	—	—	1	—	—	8
25. Establishments for the sale of non-alcoholic beverages	28	—	—	—	—	17	69	1	3	—	36	—	—	—	—	11	—	—	165
26. Manufactories of water ice (barrad)	—	—	2	—	—	9	—	1	—	—	—	—	1	—	—	7	—	—	20
27. Enterprises for the supply of water by pipe to the public for domestic or industrial purposes	—	—	—	—	—	—	6	—	—	—	12	—	—	—	—	—	—	—	18
28. Carriers and transporters of meat, fish, ice and milk	16	—	—	5	—	—	—	—	—	—	—	—	—	—	—	6	2	—	29
Class II. A.																			
1. Hotels, places for public entertainment and all establishments licensed under the Intoxicating Liquors & Public Entertainments Ordinance 1922 (including Cinemas and Public Halls)	185	11	12	3	2	63	89	15	5	—	194	15	38	4	2	28	19	—	685

NUMBER OF TRADES AND INDUSTRIES IN PALESTINE LICENSED DURING THE YEAR 1932. *(Continued)*

Nature of Trade or Industry and Classification in the Schedule under the Trades & Industries Ordinance, 1927.	SUB-DISTRICT OF																		TOTALS
	Jerusalem	Ramallah	Bethlehem	Hebron	Beersheba	Jaffa	Tel Aviv	Ramleh	Gaza	Majdal	Haifa	Acre	Nazareth	Nablus	Tulkarem	Tiberias	Safad	Jenin	
2. Alcohol depots	2	—	—	—	—	—	33	—	—	—	—	—	—	—	—	—	—	—	35
3. Cafes and restaurants not licensed under the Intoxicating Liquors & Public Entertainments Ordinance 1922	162	8	18	16	13	182	134	49	7	12	117	—	20	48	20	46	9	10	871
4. Lodging houses and boarding houses where intoxicating liquors are not sold	24	—	—	4	—	22	27	3	3	—	35	25	6	10	3	24	11	3	200
5. Public baths, bathing places, and wash-houses	16	—	—	4	—	2	3	—	4	—	4	1	—	5	—	2	2	—	43
6. Breweries, wine presses and factories of alcohol, vinegar or any fermented or spirituous liquor	9	1	3	—	—	1	2	—	—	—	1	—	1	—	—	—	1	—	19
Class II. B.																			
1. Establishments for the retail sale of petroleum, paraffin and mineral oils	31	2	5	5	2	15	274	4	9	4	39	9	15	19	5	25	29	2	494
2. Establishments employing power driven machinery	79	—	3	2	—	41	119	36	1	—	103	2	—	10	19	9	—	—	424
3. Establishments employing steam under pressure	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Garages for motor vehicles (public garages and garages for public vehicles)	25	10	3	12	—	8	—	—	3	—	23	2	8	4	—	12	3	3	116
5. Asphalt and bitumen factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Factories of explosives or of articles containing explosives	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Match factories and store houses for matches	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	2
8. Stores for explosives other than ammunition	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9. Factories for the manufacture of mineral acids and other chemical products and stores for such products	—	—	—	1	—	—	8	—	—	—	—	—	—	—	—	—	—	—	9
10. Petroleum, paraffin and mineral oil stores	13	1	—	4	2	2	7	1	2	—	21	—	2	2	—	2	4	3	66
11. Premises for the repair or sale of firearms or ammunition	3	1	—	—	—	4	—	—	2	—	5	—	1	1	—	1	—	—	18
12. Warehouses for firearms and ammunitions	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Shops for the sale of explosives	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Class III.																			
1. Cattle and horse markets	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	2
2. Cattlesheds (including sheds for oxen, sheep, and goats)	189	23	43	—	—	1	7	—	—	—	40	—	—	1	—	11	33	—	348
3. Dairies in which milk and cream are prepared for distribution or butter or cheese is manufactured	2	—	—	—	—	2	19	—	—	—	22	—	—	—	—	—	—	—	45
4. Public stables and khans and all stables or yards in which animals or birds are kept for commercial or industrial purposes	18	3	2	2	1	3	—	9	3	3	13	7	6	12	8	9	3	1	103
5. Slaughter houses	3	2	—	—	—	—	3	—	—	—	1	—	—	1	—	1	3	—	14
6. Pigsties and piggeries	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NUMBER OF TRADES AND INDUSTRIES IN PALESTINE LICENSED DURING THE YEAR 1932. *(Continued)*

Nature of Trade or Industry and Classification in the Schedule under the Trades & Industries Ordinance, 1927.	SUB-DISTRICT OF																		TOTALS
	Jerusalem	Ramallah	Bethlehem	Hebron	Beersheba	Jaffa	Tel Aviv	Ramleh	Gaza	Majdal	Haifa	Acre	Nazareth	Nablus	Tulkarem	Tiberias	Safad	Jenin	
Class I. B.																			
1. Barbers and hairdressers	100	16	15	24	5	104	79	49	32	27	126	41	30	27	17	26	23	4	745
2. Dyeworks	2	—	—	4	6	—	2	—	23	18	3	—	—	—	—	14	—	—	72
3. Factories for beating, cording, pressing or otherwise preparing wool, hair or jute for trade purposes	—	—	—	—	—	—	2	—	—	—	1	—	—	14	—	—	—	—	17
4. Laundries and dry-cleaning establishments	16	—	—	2	—	10	33	3	—	—	19	—	3	2	—	—	—	—	88
5. Pharmacies and drugstores (including attars)	41	2	2	9	1	29	56	3	9	—	34	30	1	5	1	5	2	1	231
6. Rag and second hand clothing establishments	21	2	—	3	—	11	7	3	—	—	12	—	5	—	—	9	5	—	78
7. Starch factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8. Manufacturing chemists and druggists and manufactories of medical products	1	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	3
9. Perfumery and scent manufactories	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	2
10. Premises on which materials containing poison are made or sold for agricultural purposes	—	—	—	—	—	1	2	—	—	—	1	—	—	—	—	—	—	—	4
11. Public pathological and bacteriological laboratories	2	—	—	—	—	3	2	—	—	—	1	—	—	—	—	—	—	—	8
Class I. C.																			
1. Alkali works	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2. Blood boiling establishments	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	2
3. Bone boilers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. Bone burners	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
5. Crematoria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Fellmongers (including furriers)	—	1	2	10	1	—	—	—	11	2	—	—	—	4	—	4	2	—	37
7. Gut scrapers	1	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	3
8. Knackers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9. Lime kilns	4	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—	14
10. Manure depots including depots for refuse and artificial manure depots and factories	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	3
11. Potteries, brick works and tile making industries	16	—	3	13	—	—	17	3	3	—	26	—	—	2	—	1	—	—	84
12. Tallow makers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13. Tanneries	2	—	—	12	—	—	2	—	—	—	—	—	—	1	—	1	—	—	18
14. Tripe boilers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15. Candle factories	2	—	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	6
16. Mirror factories	1	—	—	—	—	4	2	—	—	—	—	—	—	—	—	—	—	—	7
17. Paint factories	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
18. Paper factories	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1
19. Soap factories (using animal or vegetable oil and fats)	1	—	—	—	—	2	4	4	—	—	3	—	—	24	—	—	—	—	38
20. Tobacco, tombac, cigarettes or snuff factories	1	—	1	—	—	2	1	—	—	—	3	—	—	—	—	—	—	—	8
21. Cement Factories	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1

VI. QUARANTINE SERVICE.

1. General.

Cholera restrictions imposed by the department against travellers from Persia by land on the 29th October, 1931 were withdrawn on the 9th January, 1932.

On account of the prevalence of cholera in Bombay, travellers by air were required to be in possesion of certificates of vaccination against cholera and while in Palestine were subject to "surveillance" for a period of 5 days after arrival.

Owing to the presence of plague in Alexandria and Beirut, precautionary measures were enforced at the ports of Palestine against arrivals by sea from those ports as follows :-

Against Alexandria from 8th June to 24th September, 1932.

Against Beirut from 13th August to 17th October, 1932 and
from 24th October, 1932 to 7th January, 1933.

During the year, a revision of the quarantine regulations was undertaken. Owing to the excessive amount of overtime work necessitated at the ports of Palestine, a system of overtime charges was instituted.

Progress was made in the improvement of the various quarantine establishments. Proceedings were commenced for the expropriation of the site of the lazaret at Haifa, including land for future development. The construction of additional living quarters for third class passengers was put in hand.

At Jaffa, the new quarantine office and port disinfecting station were completed.

Plans of the proposed quarantine offices at the new harbour, Haifa, were prepared and provision requested for a small disinfecting establishment to be constructed in the new port area.

2. Anti-Plague Measures in Ports.

Regular rat-catching operations were conducted by the quarantine personnel in warehouses and establishments of the port areas of Haifa and Jaffa with the object of obtaining early information of the appearance of epizootic plague. Rats caught are killed under conditions to prevent the escape of body vermin. Fleas so obtained are classified. The bodies of the rats are subjected to post-mortem.

No plague infected rats were caught or found dead. 1201 rats were trapped of which 744 were R. norvegicus and 457 R. rattus. The average number of fleas per rat was 7.7. 7754 fleas were classified, as follows: — 6907 Xenopsylla cheopis, 109 Ceratophyllus fasciatus, 550 Leptopsylla and 188 Clinocephalus.

3. Port Quarantine.

22 passengers, 737 immigrants and 1 pilgrim were detained in the quarantine lazarets on arrival at the ports. 2 workmen were also detained. 17 Bills of Health, 75 booklets to coasting vessels and 11 certificates were issued.

The records of quarantine procedure are shown in separate tables.

4. Air Quarantine.

The special quarantine post established at the Gaza aerodrome was closed down early in 1932 but routine procedure in connection with air vessels and passengers was continued.

Routine quarantine supervision of air-liners of the Imperial Airways was instituted at the Royal Air Force aerodrome at Ramleh in May, 1932.

Authorization was issued by the Government of Palestine to Misr Airwork Ltd., and Iraq Airwork Ltd., to fly over and into Palestine in September, 1932.

During the year, Tiberias and Samakh became important traffic centres for air liners. Tiberias is the port of arrival for flying boats and seaplanes from Europe and Samakh a port of call and departure for air-liners proceeding to and from the far east. Supervision of this traffic was carried out by staff of the District Health Office, Tiberias.

5. Medical Surveillance.

28,900 travellers entered the country: 27,103 by sea, 1346 by land and 451 by air and were notified for health surveillance at their destinations. Of the 28,526 which were observed 13 were found to be sick from various causes. In 10 cases the cause of illness was a communicable disease.

6. Moslem Pilgrimage.

The number of pilgrims was high this year due to the fact that the festival fell on a Friday.

1282 Palestinian and 24 Transjordan citizens proceeded to the Hijaz under official arrangements made by this department. 37 other Palestinians are recorded as having proceeded under their own arrangements.

172 foreign pilgrims entered Palestine en route for the Hijaz.

All pilgrims before leaving Palestine were subjected to prophylactic vaccinations against cholera and smallpox.

2 Palestinians died during the pilgrimage and 3 others did not return. The remainder were found on completion of medical surveillance, after return, to be free from communicable disease.

25 foreign pilgrims passed through Palestine via Kantara on their return journey from the Hijaz, and were kept under medical surveillance until reaching the frontier post of departure.

The adherence of the Hijaz Government to the gold standard added considerably to the expenses of the pilgrims while in the Hijaz, and in consequence about 550 applications were made to the British Legation, Jeddah, for advances against the deposit made with the Palestine Government by individual pilgrims before their departure.

This involved the British Legation in the disbursement of some £P. 2000 on behalf of the Government. Owing to the amount of clerical labour involved, the Legation has asked that a Palestinian clerk should in future be sent to assist during the pilgrim season. As the arrangements whereby pilgrims may obtain advances is of extreme value, the department regards it of importance to assist the Legation in everyway possible to maintain this facility.

7. Immigration.

The total number of persons registered as immigrants during the year was 11,289. Their classification by countries of origin is as follows :-

Austria	104	Spain	39	Morocco	40
Belgium	32	Sweden	1	S. Africa (Union)	13
Bulgaria	69	Switzerland	31	Sudan	1
Czechoslovakia	103	U. Kingdom	443	Tanganyika	3
Danzig	26	Yugoslavia	47	Tripolitania	3
Denmark	3	Aden	280	Tunis	14
Esthonia	8	Afghanistan	186	Other countries	2
Finland	2	China	8	Canada	33
France	142	Cyprus	25	U.S.A.	909
Germany	462	Hejaz	1	Argentine	17
Greece	327	India	53	Brazil	13
Hungary	50	Iraq	1090	Colombia	16
Italy	127	Persia	456	Jamaica	2
Latvia	170	Syria	549	Mexico	17
Lithuania	243	Transjordan	1	Panama	24
Malta	3	Turkey	308	Other countries of Latin America	67
Netherlands	36	Yemen	410	Australia	9
Poland	3160	Abyssinia	5	New Zealand	3
Portugal	2	Algiers	1	Unspecified	7
Roumania	508	Egypt	441		
Russia	139	Kenya	5		

3760 immigrants and travellers permitted to remain as immigrants were medically examined under the immigration regulations, as follows :-

	Jerusalem.	Jaffa.	Haifa.	Other places.	Totals.
Number examined	605	743	2040	372	3760
Percentage of total examinations	16.11	19.76	54.25	9.89	—

None were found unfit.

RECORD OF QUARANTINE PROCEDURE WITH VESSELS — 1932

Month	Free Pratique			In Quarantine			Total of Vessels
	Number of S. S.	Number of S. V.	Totals	Number of S. S.	Number of S. V.	Totals	
January	134	7	141	—	—	—	141
February	142	6	148	—	—	—	148
March	144	67	211	—	—	—	211
April	107	170	277	—	—	—	277
May	131	160	291	—	—	—	291
June	94	285	379	—	—	—	379
July	107	482	589	—	—	—	589
August	101	440	541	—	—	—	541
September	112	374	486	—	—	—	486
October	123	245	368	—	—	—	368
November	143	109	252	—	—	—	252
December	167	20	187	—	—	—	187
TOTALS	1505	2365	3870	—	—	—	3870

RECORD OF PERSONS SUBJECTED TO "MEDICAL OBSERVATION" AT PORTS DURING 1932.

Port of	Persons detained in Lazarettes						In Quarantine on Board Ships
	Passengers	Immigrants	Pilgrims	Crew	Workmen	Totals	
Jaffa	—	7	—	—	2	9	—
Haifa	22	730	1	—	—	753	—
Acre	—	—	—	—	—	--	—
Gaza	—	—	—	—	—	—	—
TOTALS	22	737	1	—	2	762	—

RECORD OF PERSONS SUBJECTED TO "MEDICAL SURVEILLANCE" DURING 1932.

Entering Palestine at	Number Notified	Number of Passengers Found at Destination		Number Not found at Destination	Percentage Found
		Healthy	Sick		
Jaffa by sea	17023	16804	7	212	98.75
Haifa ,, ,,	10080	9950	2	128	98.75
Acre ,, ,,	—	—	—	—	—
Gaza ,, ,,	—	—	—	—	—
Kantara by land	1346	1342	4	—	100.00
By air	451	430	—	21	95.34
TOTALS	28900	28526	13	361	98.36

VII. LABORATORY SERVICES.

I. GENERAL.

Public health laboratory services during 1932 were maintained as in previous years. Diagnostic stations were provided at all the most important centres. The Government Central Laboratories at Jerusalem, the quarantine laboratories at Haifa and Jaffa, the several institutes throughout the country, provided by public and private funds alike, contributed to a service which fully met the diagnostic needs of Palestine. The unavoidable closure of many private laboratories due to economic stringency was to a large extent compensated for by the increased service rendered by government and the year's scientific achievements marked a definite advance in all branches of laboratory work. The abolition of the post of medical entomologist somewhat marred the intensive study of noxious insects, but the work was undertaken without appreciable loss by the ordinary laboratory officers, by the department's medical staff and by the malariologists of the Hebrew University. Tribute, however, must be paid to the great help afforded by Dr. P. Buxton of the London University, whose contributions to the entomology of Palestine cannot be overestimated and whose continued assistance cannot be overlooked. The department's vaccine institute, as in previous years, provided all prophylactic and curative amenities, and successfully preserved Palestine for the fifth successive year immune from small-pox, despite its exposure to menace from all land frontiers, and afforded highly statisfactory anti-rabies and anti-enterica services, despite the continued endemicity of these diseases. Moreover, the large scale production of various types of prophylactic and curative vaccines and sera amply justified the depatment's vaccine institute in Jerusalem. In addition to the provision of bacteriological, chemical, physical, entomological, biochemical, medico-legal and chemico-legal facilities, the department undertook the technical side of the weights and measures ordinance and the analytical service of the agricultural administration. Rooms for the housing of standard weights and measures and accommodation for the agricultural laboratory are in process of construction and approval from the Secretary of State is now awaited for purchase of the necessary equipment and reagents.

In spite of the mass of routine work devolving upon the personnel of the Central Laboratories, time was found for special investigations along several lines. Thus, the clinical and pathological data of the neuro-paralytic accidents of anti-rabic treatment were thoroughly investigated with the help of Professor Getzowa, chief pathologist to the Rothschild Hospital; the pathology of renal calculus, the nature of Trinidad rabies virus, the relation of rabicidal antibody to anti-rabies immunity, the serological distinction between rabies and typhus fever, the agglutinin response to anti-enterica vaccination were, inter alia, undertaken by the bacteriological division, while corrosion tests on various aluminium alloys submitted by the Crown Agents and investigations into counterfeit coining were initiated by the chemical sub-section. A very considerable increase in medico- and chemico-legal enquiries was a feature of the year's work, while the preparation of and mice experiments with thallium sulphate poison bait contributed to the knowledge of rodent control in agricultural districts. Investigations on honey and oranges are also in hand for the Department of Agriculture.

II. WORK PERFORMED.

The report, while including, for the sake of completeness, reference to the principal diagnostic findings throughout Palestine during 1932, is concerned primarily with the work carried out at the Central Laboratories, and is presented in accordance with the following table of contents.

A. BACTERIOLOGICAL DIVISION.

1. Routine Diagnosis.
2. Pathological Findings.
3. Public Health Examinations.
4. Medico-Legal Investigations.
5. Anti-Rabies Institute.
6. Calf-Lymph Establishment.
7. Vaccines and Sera.
   The Vaccine Institutes
8. Research.
9. Statistical Tables.

I. Record of Bacteriological Examinations Performed during 1932.
II. Laboratory Findings in Malaria—1932.
III. Anti-Rabies Institute Statistics.
IV. Yearly Statement of Rabies Control in Palestine.
V. Control of Rabies—Destruction of Stray Animals.

B. ENTOMOLOGICAL DIVISION.

1. Routine Duties.
2. Special Investigations.

C. CHEMICAL DIVISION.

1. Summary of Work Done.
2. Notes on Branches of Work Undertaken for Government Departments, etc.
    - (a) Public Health and Medical.
    - (b) Police.
    - (c) Customs, Excise and Trade.
    - (d) Agriculture and Development.
    - (e) Other Departments.
    - (f) Private Sources.
3. Special Investigations.
4. Weghts and Measures.
5. Statistical Tables.
    - A. Samples Examined during 1932.
    - B. Milk Analysis in Central Laboratories and Districts.
    - C. Chemical Services for Agriculture.

A. BACTERIOLOGICAL DIVISION.

1. Routine Diagnosis.

Investigations of a routine nature numbering 124,909 were carried out during the year in respect of human and of veterinary pathological conditions; of the total number no fewer than 26,632 required cultural examination. The nature of the specimens submitted and of the examination required together with the positive results of greatest interest is shown in table I.

(a) Blood Films.

Table II details the laboratory statistics of malaria for 1932. In all 4487 examinations were made and 316 proved to be positive, viz., P. vivax 207, P. malariae 6 and P. falciparum 103. It being remembered that the distribution, type and incidence of the malarias, as shown in table II, are to be regarded solely from the laboratory point of view as having obtained to the degree indicated in the districts served by the laboratories named, relative incidence for 1932 may be put as follows:- benign tertian 65.5, malignant tertian 32.6, quartan 1.9. This present finding approximates closely to that included in the 1930 annual report, when it was shown that out of the 32,912 positive results obtained during the decennium 1921—1930, the parasite of benign tertian was indentified in 21,923 cases (66.6 per cent.), that of malignant tertian in 10,306 (31.3 per cent.) and that of quartan malaria in 683 (2.1 per cent.). A very significant fact is the amazing drop during the past 10 years in the number of blood films submitted for laboratory examination. Thus, whereas in 1922 and 1923 the numbers reached 30,000 and 35,253 respectively, the figures for 1931 and 1932 have been but 5826 and 4487—a sure index of the diminished incidence of malaria in Palestine.

The Spironema recurrentis was demonstrated on 12 occasions, while from smears taken from skin lesions diagnosis of Leishmania tropica was made 13 times. Babesia bovis was observed twice.

(b) Blood Examinations.

Red and white cell enumerations totalled 3494, estimations of the haemoglobin index 3180, differential counts 3183. From 3304 specimens received for blood culture, the following organisms were recovered on the number of occasions indicated: B. typhosus in 139 cases, B. paratyphosus A and B each in 4 cases, Streptococcus in 5, Staphylococcus in 10, B. proteus in 1.

(c) Serological Investigations.

(1) Agglutination Tests.

The agglutinin content of 14,421 sera was investigated. Positive reactions in diagnostic dilutions of sera were obtained with the following organisms:- B. typhosus 848 times, B. paratyphosus A 27, B. paratyphosus B 12, B. enteritidis Gaertner 2, Br. melitensis 11, Br. abortus 7, Proteus vulgaris X_{19} on 35 occasions. In 48 cases a diagnosis of "enterica, type not differentiated" was made. In the serological investigation of enterica diseases it has become increasingly apparent that a combination of quantitative and qualitative methods is to be preferred and work meantime being carried out here upon the agglutinin response to various types of prophylactic vaccines has strengthened that view

(2) Isohaemagglutination.

Blood grouping was performed on 456 occasions, mainly with a view to keeping the roster of volunteers suitable to act as "donors" in emergency up to strength.

(3) Diagnosis of Syphilis.

The Wassermann Reaction was carried out on 3514 sera, of which 539 proved to be positive. Kahn's test, applied to 648 sera, was positive in 39 cases.

(4) Complement-fixation Tests.

(a) During the year Besredka's technique was used in respect of 33 sera submitted for the diagnosis or corroboration of existing tuberculosis. Of the number examined only 10 gave positive results, 2 reacting strongly. In view of the clinical histories of these cases it appeared that the reaction is by no means the valuable aid to diagnosis it was once held to be. Its continuation as part of the tuberculosis survey now proceeding in Palestine has not been advocated.

(b) Weinberg's test for the detection of echinococcus disease was carried out on 3 occasions without positive result.

(5) Precipitin Reactions

To permit differentiation between blood of human origin and blood from other sources, the specific protein test was applied in 173 cases during 1932. The performance of this test was formerly contingent on the Police Department's obtaining the Attorney General's sanction to forward exhibits to the Central Laboratories but this restriction has now been removed in order to facilitate criminal investigation. As in previous years all precipitating sera required for such differentiation were prepared in the laboratories.

(d) Faeces.

Microscopical examination was carried out on 13,155 stool specimens, cultural investigation on 8689. Of the microscopic examinations the following are the principal findings:-

(1) **Protozoa:** Entamoeba histolytica (free) 180; E. histolytica (cyst) 199; Giardia intestinalis 434; Trichomonas intestinalis 410; Chilomastix mesnili 66.

(2) **Worm ova:** *Nematodes*:- Trichuris trichiura 930, Ascaris lumbricoides 924, Ankylostoma duodenale 546, Enterobius vermicularis 36. *Cestodes*:- Taenia saginata 132, Hymenolepis nana 77, Dibothriocephalus latus 2. *Trematodes*:- Schistosoma mansoni 4, Heterophyes heterophyes 37.

As a result of the cultural investigations the B. typhosus was grown 24 times, B. paratyphosus A and B each 6 times, B. dysenteriae 197 times, viz. B. Shiga 38, B. Flexner—Y 153 and B. Strong 6. Determination on behalf of local practitioners of the presence or absence of aciduric organisms in the stool involved considerable time and work during 1932.

(e) Urine.

20,388 routine chemical examinations and 14,618 microscopic investigations were carried out during 1932. The ova of S. haematobium were found on 31 occasions but little else of scientific importance emerged. From 1,419 catheter specimens submitted for bacteriological examination the more important organisms isolated were: B. coli communis 5 times, B. coli communior 10 times, B. typhosus 4 times and N. gonorrhoeae twice.

(f) Sputa.

2180 specimens of sputa were dealt with from which the Mycobacterium tuberculosis was recovered on 273 occasions. The Str. pneumoniae was detected 28 times and an Aspergillus twice.

(g) Pharyngeal Swabs.

From 7299 patients and contacts the nasopharyngeal swabs taken yielded the following organisms: C. diphtheriae 491 times, B. leprae 17 times, the organisms of Vincent's angina on 33 occasions.

(h) Urethral Smears.

Of 830 urethral and vaginal discharges examined 192 contained the N. gonorrhoeae, 1 the C. diphtheriae.

(i) Cerebro-spinal Fluid.

Lumbar puncture made on 140 patients showed Myco. tuberculosis to be the causal agent of meningitis twice, N. meningitidis 10 times, Str. pneumoniae 14 times, Streptococcus pyogenes 12 times and staphylococcus p. aureus twice.

(j) **Rabies.**

As formerly all investigations for the detection of rabies in animals were undertaken in the Central Laboratories on behalf of the Veterinary Department. From 160 brains of suspected animals sections and smears taken revealed the presence of Negri bodies on 114 occasions. As will be seen elsewhere in the report, the biological test was carried out in cases to which special importance was attached.

(k) **Miscellaneous.**

In abscess pus B. coli was found once, B. anthracis 11 times. 64 seminal fluids were examined for the detection of viable spermatozoa. 99 specimens of hair were investigated in school children and trichophyton and favus were demonstrated on 16 and on 2 occasions respectively.

As usual the H. Koch-Weeks and H. lacunatus proved to be the main causes of conjunctivitis in the proportions of 7:1. 138 specimens of gastric juice were investigated and reported on to general practitioners.

The miscellaneous examimations totalled 2990 and, as may be appreciated, included the widest scope of laboratory work.

2. Pathological Findings.

Besides the 160 brain sections examined for the presence of Negri bodies 89 morbid tissues were sent to the Central Laboratories for opinion. Diagnosis was made as follows:- Epithelioma in 44 cases, carcinoma in 7, adenoma in 12, fibroma in 3, adeno-carcinoma in 2, melanoma in 2, fibro-myxoma in 2, embryonic tissue in 2, neuro-fibroma, tumour of parotid, papilliferous carcinoma, myxoma, sarcoma, benign polyp, lympho-sarcoma, placental tissue, rodent ulcer, chondroma, tuberculosis, scirrhus cancer, osteo-fibroma, dental cyst and hypernephroma once each.

A considerable investigation into the histological condition of brain and spinal cord in cases of post-treatment paralysis were undertaken in conjunction with Professor Getzowa, who also helped in the diagnosis of pathological conditions requiring a second opinion. A brief reference to the joint work on accidents following antirabic treatment will be found in section 5 of this report. The investigations, clinical and histo-pathological, will be published elsewhere in detail.

3. Public Health Examinations.

(a) **Tuberculosis Enquiry.**

In the 1931 report it was mentioned that a preliminary survey of tuberculosis in Palestine was instituted by the department during that year but that up till then no investigation into the tuberculosis incidence in raw milk supplies had been considered feasible. During 1932, however, an attempt to remedy this state of affairs was made with the result that by December 106 samples of raw milk had been subjected to biological test by guinea-pig inoculation. The details of biological testing followed those adopted in the inquiry into the tuberculosis infection of the milk supply of Scotland. Duplicate samples of 50 c.c. of the well-mixed milk were centrifuged at 3000 R.P.M. for one half hour, at the end of which time the sediment alone of each tube was suspended in 3 c.c. of sterile normal saline solution. Two guinea-pigs were then inoculated, each with 3 c.c. of suspension, both inoculations being made subcutaneously on the inner side of the left thigh. The pair of animals inoculated with a particular sample were kept together but separate from other inoculated animals. The guinea-pigs were killed, one at the end of 4 weeks and one at the end of 8 weeks. It is of interest to record that each one of the 106 raw milks so far examined proved to be wholly free from tubercle bacilli. There was a complete absence of any lesion in all guinea-pigs subjected to test. In all 300 milks will be investigated in this respect, but the results now indicated are not surprising in view of the rarity of tuberculosis among slaughter-house cattle.

(b) **Water Examinations.**

Complete bacteriological examinations were made on all samples of water supplies, aerated waters and ice submitted through District Health Offices. During 1932 the total number of samples received was 1316. Although many samples from cisterns and storage tanks were unsatisfactory and often highly polluted, in no case could any pathogenic organism be detected. A swimming pool was erected during the year in one of the new buildings in Jerusalem. A guarantee was given to control, by laboratory means, the purity of the water and the water will be investigated weekly in respect of its content of free chlorine and bacteriological count. Preliminary tests went to show that when chlorination is preceded by mechanical filtration, sterility of the water can be secured when free chlorine is present to an extent of 0.5 parts per million.

(c) Milk Examinations.

Milk samples submitted for evaluations of purity totalled 643. Investigation was limited to a numerical estimation of bacteria per cubic centimetre of milk. These samples were additional to those described under "Tuberculosis Enquiry".

(d) Examination of Cheese.

17 samples of cheese believed to have been incriminated as the cause of food poisoning were thoroughly investigated. No poisonous metals could be detected, no tyrotoxicon. Common organisms present were B. coli communior and B. Morgan No. 1.

(e) Examination of Imported Shaving Brushes.

5 per cent of all consignments of shaving brushes imported into Palestine were examined with a view to precluding the entry of anthrax-infected brushes. During 1932 the number tested was 132.

(f) Examination of Rats for Plague.

As in previous years, systematic rat catching by trained personnel was regularly practised in the port towns of Haifa and Jaffa, where bubonic plague has been known to occur. During the year the number of rats caught was 1201, of which Rattus norvegicus totalled 744 and Rattus rattus 457. Pasteurella pestis was not found. Fleas removed from the rats were identified but this subject will be dealt with in the Entomological Division's Report.

(g) Investigation into Outbreak of Oriental Sore.

During the summer an opportunity was taken of investigating an outbreak of cutaneous leishmaniasis in Beit Jala, a small town some 4 miles from Jerusalem. All stages of the granulomatous process were to be seen from the initial papule to the depressed scar. Phlebotomus papatasii was extremely prevalent. A fuller account of the inquiry will be published later.

(h) Ankylostomiasis Enquiry.

Prior to 1925 investigation had been made into the incidence rate of ankylostomiasis in the area N. E. of Jaffa with its well-irrigated orange groves. Petah Tikvah, a Jewish colony of some 5000 inhabitants then was shown to be the principal focus of infection. An enquiry was thereupon made by the department in 1925 to determine whether the disease had spread to the Arab population of neighbouring villages, from which the labour for the colony's orangeries was mostly derived. Results showed infection to be about 6 per cent. but such evidence as was available suggested a low infestation rate. During 1931, however, the disease appeared to be increasing when judged by the number of laboratory findings and a new investigation was begun in 1932. The Jaffa laboratory on the occasion of the enquiry and during the year examined 1336 stool specimens and found 464 to be positive. This ankylostomiasis campaign will be referred to elsewhere in the departmental report.

(i) Miscellaneous Investigations.

It is part of the duties of the Central Laboratories to control, by adequate examination, imported vaccines and therapeutic sera. Release from customs of such preparations as vaccines, sera, virus and all products of bacterial origin can only be effected on the grant by the laboratories of a satisfactory certificate. 21 vaccines and 5 sera were tested for sterility during 1932.

Search for new foci of infection with S. haematobium was vigorously pursued throughout the year but without success. Snails collected during the work were forwarded to the Central Laboratories for indentification.

Only one snake was submitted for laboratory opinion during 1932; it was identified as Vipera xanthina vel zantina (gray).

4. Medico-Legal Investigations.

These dealt mainly with enquiries into the nature and origin of stains on clothing, weapons, saddles, earth, wood and the like and necessitated the performance in many instances of preliminary, corroborative and differentiating tests for blood. Other investigations included the examination of garments for the presence of spermatozoa in cases of alleged rape and sodomy, identification of the type of material expelled from the uterus, determination of origin of hairs and fibres and pathological examinations in cases of death from unknown causes. The important part played by the bacteriological division in the scientific detection of crime will be realized from the fact that during 1932 the number of cases referred to that laboratory amounted to 71, which comprised 313 police exhibits and involved 402 investigations. The presence of human blood was proved in 80 exhibits after the application of 173 precipitin tests. Blood grouping was carried out on 88 occasions, although the inability to obtain an extract in sufficient concentration frequently rendered the work valueless. 50 different articles were examined for the purpose of detecting spermatozoa. In these investigations the Florence test and microscopic examination were invariably used. Differentiation between human and animal hair was made on 32 occasions. Of 50 bones submitted for opinion, 29 proved to be human, 21 animal. Brain substance on weapons was identified twice. The nature of sand and cloth specimens was twice determined. 3 embryos were dealt with and 1 full term foetus.

The following analysis of work done will best illustrate its scope and variety :

Type of Exhibit	Reason for Examination.	Number of Articles Investigated
Blood-stained articles	Determination of origin of blood	173
Blood-stained garments	Ascertainment of blood group	88
Suspicious stains on clothing	Tests for presence of spermatozoa	50
Hairs	Differentiation between human and animal	32
Bones	Identification	50
Uterine contents	Nature and type	3
Brain subtance	Identification	2
Sand	Nature	1
Fabric	Comparison	3

Expert evidence by members of the bacteriological staff was given before the courts on many occasions.

5. The Anti-Rabies Institute.

(a) General.

The vaccine used in antirabic treatment is prepared at the Central Laboratories and issued to 25 district institutes — a degree of decentralization made possible only by the continued use of a carbolized virus. The rabies strain employed was originally obtained from the Pasteur Institute, Paris, and no incorporation of local strains into the vaccine has been found advisable as the Paris virus has invariably proved, on animal experimentation, to be greatly superior in immunizing power to any isolated here.

During 1932 over 150,220 c. c. of carbolized vaccine were prepared and issued — an increase of 20,000 c. c. over the 1931 distribution. In all 1690 bitten persons received treatment but in 525 cases it was interrupted, the biting animals having remained well after a period of 10 days' observation.

(b) Results of Anti-Rabies Treatment.

Table III, arranged according to the recommendations of the Health Organisation, League of Nations, indicates the number of bitten persons treated during 1932 at the 25 anti-rabies centres supplied with the department's carbolized virus. During the year 3 cases of hydrophobia developed despite specific treatment. Each case received the full course of injections (5 c. c. daily of a 1 per cent. killed carbolized virus administered over 14 consecutive days) and each reported for advice without delay. The number of days elapsing between the date of bite and the onset of symptoms in two of the cases, 42 days and 168 days respectively, relegate those to the class regarded conventionally as "failures of treatment". Below will be found information tabulated in respect of the three deaths.

Number of Case	Sex	Age	WOUNDS (None efficiently cauterized)			Biting Animal	In Days	
			No.	Location	Gravity		Period of Incubation of Hydrophobia	Duration of Symptoms
1	M	12	Multiple	Face	Severe	Wolf	15	3
2	F	11	2	Leg	Medium	Dog	168	170
3	M	8	1	Leg	Medium	Dog	42	44

Cases 1 and 3 were of Arab, case 2 was of German extraction.

The occurrence, however, within the three months' period April 28th to July 29th, 1932 of three paralytic accidents following on treatment with the department's killed carbolized rabies virus vaccine, is surely without precedent anywhere. In the series were included two fatally-ending cases of Landry's paralysis and one case of paresis of the lower extremities, in which recovery took place without loss of control at any time over the urinary and rectal sphincters. The fact that on this occasion an opportunity was afforded of studying in the central nervous system the pathological anatomy of an exceedingly rare condition of which the etiology still remains obscure, lent added interest. The first case was a young Moslem, aged 29 years, who on April 13th, 1932 was severely bitten by a camel, which inflicted, through the clothing, a deep wound on the right upper extremity, Antirabic treatment was begun on April 15th, but, on the camel's remaining healthy after 10 days' observation, was discontinued on April 26. On April 28th, without any premonitory fever, headache, vomiting or backache, the patient experienced a feeling of weakness in all four extremities and next day an almost complete motor paraplegia had replaced the earlier paresis. The further development of a typical Landry's paralysis compelled admission to hospital, where he died after an illness of six days' duration. The second case was a 5 years' old Jewish boy, who as events proved, had run no risk of hydrophobia. After the tenth injection he developed symptoms of an acute ascending spinal paralysis, which led to death on the seventh day of illness.

The third case was a Jewish girl of Palestinian origin, also 5 years of age. On June 28th she was scratched, not bitten, by a cat. Antirabic treatment was commenced at her parents' request and was continued for only 10 days, the cat having remained healthy. On July 12th the child complained of weakness in the legs and on it being found that she could no longer stand up, she was admitted to hospital where a diagnosis of dorso-lumbar myelitis was made. Within three weeks she was discharged from hospital, recovery being complete.

In the two fatal cases of Landry's paralysis partial necropsies were permitted. Both showed an almost complete absence of gross pathological changes. No inflammation, oedema, swelling, or areas of softening obtained, no obvious destruction of the white matter in brain or cord. There was no loss of design in any part of the spinal cord, differentiation between white and grey matter being clearly marked. The meninges were unaffected. No positive results followed the direct subdural inoculation of rabbits with emulsions of either brain. Histologically it was demonstrated that in the nerve centres the brunt of the attack was borne by the ganglion cells, in which, varying with the region examined, all stages of degeneration were observed from slight chromatolysis to nucleolysis and complete necrosis. Periganglionic and perivascular cell infiltrations did not occur and perivascular zones of demyelination were wholly absent. Axis cylinders and myelin sheaths were everywhere unaffected. Fat stains proved negative. Neuroglia was not increased. In the spinal ganglia the capsule showed cellular proliferation, most of the nerve cells had undergone necrosis and occasionally had been replaced in whole or in part by endothelial cells. The detailed clinical and histo-pathological findings are meanwhile being published elsewhere.

(c) **Occurrence of Rabies in Animals.**

In the 1931 report it was stated that evidence was accumulating to predict an epizootic of rabies during 1932 and that advice had already been given as to the necessity for applying the sternest measures of control. By the end of March more cases of rabies among animals had occurred than during 1931 and at the end of December a total of 172 was reached. The animals affected were 128 dogs, 16 cats, 10 solipeds, 9 ruminants, 7 jackals, 1 wolf and 1 rat. Particulars regarding the nature of the biting species and the localities in which they were reported have been derived from the monthly veterinary bulletins issued by the Department of Agriculture. As usual the dog played the chief role as reservoir of the disease accounting for 74 per cent. of animal rabies. The period of greatest incidence was February, March and April when almost 50 per cent. of the cases were notified. Of the 3 cases of hydrophobia dogs were responsible for 2, wolves for 1. In the Central Laboratories 160 brains extracted from suspectedly rabid animals were subjected to hystological examination and in 114 of these Negri bodies were demonstrated. Confirmatory biological tests were carried out on 25 occasions.

Procedure governing the treatment of bitten animals was that described in the 1931 report. During 1932 vaccination of 114 animals was performed, viz., 90 cows, 20 horses, 3 donkeys and 1 mule. In 108 instances the dog was the biting animal, in 5 the donkey, and in 1 case the horse. Inasmuch as only one cow died with symptoms of rabies 8 days after vaccination it might be considered that the vaccine—a 5 per cent. killed carbolized virus– administered over 7 days in a graduated dosage totalling 33 c. c. had proved its value, but numbers treated are still too small to permit useful generalisation.

(d) Prophylactic Inoculation of Dogs.

The originally advocated single dose injection of 1 c. c. of a 20 per cent. suspension of killed carbolized vaccine was superseded in 1931 by 3 injections on succeeding days of 2 c.c. of a 5 per cent. suspension. Throughout 1932 the dosage was elevated to 5 c. c. daily. The prophylactic was used on a pack of hounds recently formed to hunt the jackal and would appear to have served its purpose. Little advantage, however, is taken by the general public of thus protecting their animals and the legislation now in force requires no application of compulsory canine prophylaxis even in areas declared to be rabies-infected.

(e) Measures of Control.

Satisfactory control was obtained during 1932 as a result of the unremitting efforts of the Police, Agriculture and Health Departments together with Municipalities to secure a diminution in the numbers of the dog, cat and jackal population. The success of the campaign is best reflected in the fact that during the year 29,433 animals were destroyed, viz., 26,100 dogs, 3146 cats and 187 jackals. Table V, prepared by the Chief Veterinary Officer, details this aspect of rabies control. Most unfortunately, however, the legislation dealing with this subject has now been found to be defective. Control in the past was fully secured by a series of rabies rules made under the Diseases of Animals Ordinance, 1926, but certain of these rules were recently proved in a court of law to be ultra vires. The task of revising and redrafting present rabies rules will be the immediate duty of officers representnig the Police, Veterinary and Health Departments and it is confidently expected that as strict control will shortly be effected as has been possible in the past and has done so much to rid Palestine of the menace of rabies.

6. The Calf Lymph Establishment.

(a) General.

During the cool period January to April, 1931, small-pox vaccine totalling 591,400 doses was prepared in the calf lymph establishment of the Central Laboratories and, together with 120,000 doses remaining over from the 1930 yield, placed in the refrigerating room recently erected on the premises. In as much as issues during 1931 did not exceed 200,000 doses, however, it was decided to restrict the production for 1932 to such quantity only as would insure for Palestine and Trans-Jordan a supply adequate for routine and possible epidemic needs.

As departmental policy prescribes the keeping in reserve of one full year's requirements (650,000 doses), the manufacture of some 200,000 doses had, therefore, to be envisaged — a quantity capable of production within a short working period in spring, In all 241,600 doses of small-pox lymph were prepared and below will be found details of cost, manufacture and efficacy. A distribution of 215,005 doses was effected to Palestine and Trans-Jordan; to Trans-Jordan 91,500 doses were sent to cope with a threatened epidemic and of that quantity 55,000 doses were supplied free of charge in view of that country's economic stress. During November and December issues reached 100,000 doses.

(b) Cost of Calf Lymph Production During 1932.

(1) Statement of Manufacture.

Number of calves purchased	25
Number of calves successfully vaccinated	25
Number of grammes of pulp collected	1208
Average number of grammes per calf	48.32
Number of doses produced	241,600

(2) Statements of Costs.

	£P. Mils	£P. Mils
(a) *Expenditure.*		
Price of 25 calves	102.250	
Forage, stabling, etc.	19.200	121.450
(b) *Revenue.*		
Sale of carcases	43.810	43.810
(c) *Actual Cost.*		
Cost of total production	77.640	
Cost per dose manufactured		0.317 mil = 0.08d.

It has to be observed that the increase in cost per dose from 0.05d. in 1931 to 0.08d. in 1932 is explained by the fact that during 1932 the hides, etc., of the calves employed were, for the first time since the inception of the establishment, left to the supplier to cover Municipal slaughter-house fees.

(c) **Remarks**.

(1) Calf-lymph production was effected during 1932 at a cost of 0.317 mil or 0.08d. per dose. A total dosage of 241,600 was manufactured at a cost to government of £P 77.640 and was placed in cold storage. Issues will be made at the expiration of six months when, from experiments carried out in the Central Laboratories, it has been proved that lymph batches have become free from extraneous organisms.

(2) The lymph reserve stocks in Palestine now amount to nearly 700,000 doses.

(3) The high average of 48 grammes of lymph per calf was obtained during 1932.

(4) Despite the large quantity of lymph produced from each calf there was no lessening of potency. Figures for 1932 show that of 42,902 primary vaccinations performed and observed 40,274 or 94 per cent. were successful.

(5) The protective value of the lymph prepared is reflected in the freedom which Palestine has enjoyed from small-pox for five successive years, although there has been considerable incidence of the disease on all land frontiers.

(6) No case of post-vaccinal encephalitis has yet been encountered although the department's lymph has been used in 728,030 vaccinations since 1924.

(7) Sales of calf lymph during 1932 amounted, despite large free issues, to £P 196.075 or £P 118.435 more than the total cost of production during the year.

(8) Palestine, therefore, remains free from small-pox at, if emoluments of personnel are excluded, no cost to Government in respect of the vaccine used.

7. Vaccines and Sera.

(a) **Vaccines.**

The bacteriological staff of the Central Laboratories again undertook the preparation of all prophylactic and curative vaccines required in Palestine. The occurrence in certain areas of enteric disease in epidemic form necessitated the preparation and issue, within the three months' period June—August, of 36,700 c. c. of T. and T. A. B. vaccines. An intensive vaccination of the population in areas bordering on the centres of infection shortly brought the epidemic to an end. Much experimental work carried out here went to show that the 0 — agglutinin content of immunised human beings and animals varies directly with the quality of strains used in the vaccines. If the 0 titre is an index of immunity conferred, the success of the vaccine in use during 1932 is explained. T. A. B. vaccine was also employed in the protection of all immigrants and in the inoculation of case-contacts ; anti-cholera vaccine was used to confer immunity on the Palestinian and Transjordan contingents of the Mecca pilgrimage.

Autogenous vaccines, prepared in cases of furunculosis, diseases of the genito-urinary and respiratory tracts and in acne, numbered 652.

The vaccine work carried out during 1932 is tabulated below.

Nature of Vaccine.	Total Dosage Manufactured	Total Dosage Issued.
Small-pox lymph.	241,600	215,005
Anti-rabies vaccine.	139,666	150,220
Anti-typhoid.	22,300	12,270
T. A. B.	76,520	64,250
Anti-cholera.	4,500	3,420
Anti-plague.	1,200	330
Autogenous.	19,560	19,560
Total.	505,346	465,055

(b) Sera.

Agglutinating, haemolytic and all the precipitating sera used in ordinary diagnosis, in the Wassermann reaction and in medico-legal investigations were prepared in the Central Laboratories. Quantities of groups II and III sera were obtained from volunteers and tubed for future use in the grouping of blood donors, and in medico-legal investigations connected with cases of disputed paternity, murder, rape and the like. For economic reasons the establishment of a government serum institute has not been envisaged.

8. Research.

Considerable experimentation with the Trinidad strains of rabies virus, both human and bovine, was made. A full report on this virus has already been published by Remlinger and Bailly, but these workers contented themselves with transmission experiments to and the finding of Negri bodies in rabbits, guinea-pigs, dogs, cats, mice and the like. In our work the question of cross-immunity between the Trinidad strains and the Paris strain was studied, but the results have not been published, as the experiment required revision. The findings will shortly be discussed elsewhere.

An investigation into the agglutinin response in human beings to various forms of anti-enterica vaccines has already been referred to. The quantitative and qualitative nature of the response was noted in some 125 individuals and the work is now nearing completion.

The paralytic accidents complicating antirabic treatment were also studied in respect of their clinical picture, types, diagnosis, mortality rates, incidence, prognosis, pathological anatomy, histology, and aetiology. Further work on the histology of the condition in brain and spinal cord is in progress and will, it is estimated be completed during 1933.

PUBLICATIONS

In connection with the work described in the last year's report the undermentioned articles were prepared and published.

(a) Unusual Development of Rabies Symptoms in Man. *Annals Trop. Med. and Parasitol.* Vol. XXVI, p. 55, 1932.

(b) Rabies v. Typhus. *Trans. Roy. Soc. Trop. Med. & Hyg.* Vol. XXV, p. 353, 1932.

(c) The Occurrence of True Bone within a Renal Calculus. *Journal of Path. and Bact.* Vol. XXXV, p. 373, 1932.

(d) The Rabicidal Antibody Content of Rabbit Immune Serum as an Index of Acquired Resistance to Rabies Infection. *J. of Hygiene.* Vol. XXXII, p. 491, 1932.

All were published under the joint authorship of Drs. G. Stuart and K. S. Krikorian.

TABLE I.

RECORD OF BACTERIOLOGICAL EXAMINATIONS PERFORMED DURING 1932.

Nature of Specimens	Total Examinations	Nature and Number of Positive Findings	
Blood Films	4,487	P. vivax	207
		P. malariae	6
		P. falciparum	103
		Sp. recurrentis	12
		Leishmaniasis	3
Blood Cultures	3,304	Bact. typhosum	139
		Bact. paratyphosum A	4
		Bact. paratyphosum B	4
		Staphylococcus	10
		Streptococcus	5
		Proteus vulgaris	1
		Str. pneumoniae	5
Cell Enumerations	3,494	—	—
Haemoglobin Index	3,180	—	—
Differential Counts	3,183	—	—
Histological Sections	249	Negri bodies	114
		New growths	89
Water Analysis	1,316	—	—
Milk Analysis	748	—	—
Serum Reactions			
(a) Diagnosis of Syphilis	3,514	Wassermann Reaction	539
		Kahn Test	39
(b) Agglutinations	14,421	Bact. typhosum	848
		Bact. paratyphosum A	27
		Bact. paratyphosum B	12
		Br. melitensis	11
		Proteus X_{19}	35
(c) Isohaemoagglutination	456		
(d) Complement-Fixation Tests :			
Besredka's	33	Positive tuberculosis	10
Weinberg's	3	Echinococcus	0
(e) Precipitin Reactions	162	Human blood	92
Sputa	2,180	Myco. tuberculosis	273
		Str. pneumoniae	28
Rats for Plague	1,201	B. pestis	0
Pharyngeal Swabs, including Naso-pharyngeal and Nasal	7,299	C. diphtheriae	491
		Myco. leprae	17
		Vincent's angina	33
		Str. haemolyticus	8
Faeces			
(a) Microscopic Examination	13,155	E. histolytica (free)	180
		E. histolytica (cyst)	199
		Giardia intestinalis	434
		Chilomastix mesnili	66
		Trichomonas intestinalis	410
		WORM OVA:	
		Ascaris lumbricoides	924
		Trichuris trichiura	930
		Enterobius vermicularis	36
		A. duodenale	546
		S. mansoni	4
		T. saginata	132
		Hymenolepis nana	77
		Heterophyes heterophyes	37
(b) Cultural Examination	7,968	Bact. typhosum	24
		Bact. paratyphosum A.	6
		Bact. paratyphosum B.	5
		Bact. dysenteriae Shiga	38
		Bact. dysenteriae Flexner-Y	153
		Bact. dysenteriae Strong	6
Urines			
(a) Microscopic	14,618	S. haematobium	31
(b) Bacteriological	1,419	Bact. typhosum	4
		Bact. coli	5
		Bact. coli communior	10
(c) Chemical	20,388		

Nature of Specimens	Total	Nature and Number of Positive Findings	
Rabies			
Microscopic Examination	160	Negri Bodies	114
Biological Tests	25	Positive	14
Urethral Smears	830	N. gonorrhoeae	192
TRANSUDATES AND EXUDATES			
(a) Abscess pus	691	Pyogenic organisms	593
(b) Conjunctival exudates	76	Haem. Koch-Weeks	14
		Haem. lacunatus	2
(c) Cyst fluids	39		
(d) Lumbar puncture	140	N. meningitidis	10
		Str. pneumoniae	14
		Str. pyogenes	12
		Mycobact. tuberculosis	2
		Staphylococcus	4
(e) Syphilitic	10	Spironema pallidum	3
Shaving Brushes for Anthrax	132	B. anthracis	0
Other Examinations etc.	2,990		
Auto-vaccines	652		
Gastric juice	138		
Smears	63	L. tropica	13
Hair	99	Trichophyton	16
		Favus	2
Seminal fluid	64	Living spermatozoa	5

TABLE II.

LABORATORY FINDINGS IN MALARIA—1932

From 4487 Examinations.

Type and Locality	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total	Yearly
BENIGN TERTIAN MALARIA														
Jerusalem	2	1	5	1	3	11	9	6	5	10	2	4	59	
Jaffa	6	3	1	5	4	4	11	12	15	6	5	10	82	
Haifa	2	—	1	4	7	2	14	18	5	4	3	6	66	
Total recorded	10	4	7	10	14	17	34	36	25	20	10	20	Total	207
MALIGNANT TERTIAN MALARIA														
Jerusalem	—	1	—	—	2	1	4	1	1	7	4	2	23	
Jaffa	—	1	—	—	—	1	1	9	8	4	5	8	37	
Haifa	—	—	—	1	2	2	3	13	12	3	4	3	43	
Total recorded	—	2	—	1	4	4	8	23	21	14	13	13	Total	103
QUARTAN MALARIA														
Jerusalem	—	—	—	1	1	—	—	1	—	—	—	—	3	
Jaffa	—	—	1	—	—	—	—	—	—	—	1	—	2	
Haifa	1	—	—	—	—	—	—	—	—	—	—	—	1	
Total recorded	1	—	1	1	1	—	—	1	—	—	1	—	Total	6
Total Monthly Findings (all forms)	11	6	8	12	19	21	42	60	46	34	24	33	Yearly	316

TABLE III.

ANTI-RABIES INSTITUTE STATISTICS.

January 1st to December 31st, 1932.

1. General Classification.

Number of bitten persons treated at the 25 Anti-Rabies Centres	1690
Number of interrupted or unnecessary courses of treatment— biting animals remaining well after a period of 10 days' observation	525
Number of treatments carried out regularly and completely	1165
Cases of hydrophobia occurring after 15 days of the completion of treatment, *i. e.*, failures	3
Total mortality rate	0.17
Failure rate	0.17

2. Classification of bitten persons according to species of biting animals.

Dogs	1132	Solipeds	109
Cats	220	Ruminants	122
Jackals	29	Other animals	73
Wolves	5		

3. Classification according to condition of biting animal.

A. Rabid by laboratory tests	162
B. Rabid clinically	61
C. Suspected of rabies by altered behaviour	236
D. Unknown (no information available)	535
E. Healthy (after 10 days observation)	696

4. Classification according to location of bite.

Head and face	100
Upper extremity	764
Lower extremity	743
Body	83

5. Classification according to severity of bite.

Severe	131
Slight	1367
Not visible	192

6. Interposition of clothing.

On naked skin	1138
Through clothing	552

7. Whether cauterized or not within half hour after bite.

Cauterized	37
Not cauterized	1653

8. Number of days after bite or contact when treatment was begun.

0 — 4	1452
5 — 7	162
8 — 14	49
15 — 21	14
Over 21	13

9. Occurrence of paralytic accidents.

Three — described under paragraph 5, Bacteriological Divison.

TABLE IV.

STATEMENT OF RABIES AND ITS CONTROL IN PALESTINE DURING 1932.

Centre for Treatment	Bitten Persons		Biting Animals																														
			Specification														Total number of animals	Condition					Disposal									
																		Definitely rabid					Killed				Ran away				Kept under observation	
	Number applying for advice and aid	Number actually treated	Wolves	Cats	Dogs	Foxes	Hyenas	Jackals	Horses	Donkeys	Rabbits	Cattle	Cows	Camels	Rats	Unknown		By laboratory investigation	Clinically	Suspected rabid	Healthy	No information available	Rabid	Suspected	Healthy	No information available	Rabid	Suspected	Healthy	No information available	Died within 10 days	Remained healthy
Jerusalem	172	143	—	39	114	—	—	—	2	7	—	—	1	2	2	1	168	5	—	7	92	64	5	7	—	—	—	—	—	64	—	92
Bethlehem	16	7	1	—	14	—	—	—	—	—	—	—	—	—	—	—	15	1	—	—	13	1	1	—	—	—	—	—	—	1	—	13
Hebron	20	20	—	2	14	—	—	—	—	—	—	—	—	—	—	2	18	—	—	3	5	10	—	3	—	—	—	—	—	10	—	5
Beersheba	12	12	—	—	10	—	—	—	1	—	—	—	—	1	—	—	12	—	—	2	3	7	—	2	—	—	—	—	—	7	—	3
Jaffa	358	358	—	53	219	—	1	7	18	13	—	—	—	3	16	2	332	8	4	15	137	168	9	13	—	—	1	2	—	168	2	137
Ramle	70	70	—	2	49	—	—	3	—	1	—	—	—	—	—	8	63	—	2	4	9	48	1	3	—	—	1	1	—	48	—	9
Gaza	24	24	—	2	16	—	—	—	2	—	—	—	—	4	—	—	24	—	—	2	8	14	—	2	—	—	—	—	—	14	—	8
Haifa	190	190	—	23	110	1	—	4	7	—	—	—	2	—	12	2	161	20	5	10	57	69	18	8	—	—	2	1	—	69	6	57
Haifa Kupat Cholim	131	131	—	23	58	—	—	—	5	2	—	—	2	—	2	2	94	2	1	3	17	71	3	2	—	—	—	—	—	71	1	17
Acre	29	29	—	1	19	—	—	—	—	—	—	—	—	—	—	—	20	—	2	10	1	7	1	11	—	—	—	—	—	7	—	1
Nazareth	37	37	—	2	23	1	—	—	4	1	—	—	—	—	—	—	31	3	3	2	17	6	6	1	—	—	—	1	—	6	—	17
Tiberias	79	79	—	8	52	—	1	—	10	1	—	—	—	—	3	1	76	2	—	9	45	20	2	8	—	—	—	1	—	20	—	45
Nablus	89	89	—	—	73	—	—	1	—	1	—	—	—	1	1	2	79	1	3	9	26	40	4	7	—	—	—	2	—	40	—	26
Tulkarem	63	63	—	6	40	—	—	2	—	1	—	—	—	—	—	1	50	17	2	12	5	14	18	10	—	—	1	1	—	14	1	5
Jenin	117	117	—	5	25	—	—	3	2	—	—	—	1	—	—	—	36	4	4	14	—	14	5	12	—	—	—	5	—	14	—	—
Safad	36	36	—	4	28	—	—	—	1	1	—	—	—	—	—	—	34	4	—	1	13	16	4	1	—	—	—	—	—	16	—	13
Tel Aviv	101	101	—	19	67	—	—	1	5	5	—	1	1	—	2	—	101	—	1	1	48	51	—	—	—	—	1	—	—	51	1	48
Petah Tiqva	78	78	—	17	43	—	—	—	1	7	2	—	—	—	3	1	74	1	—	4	18	51	1	3	—	—	—	—	—	51	1	18
Herzelia	16	16	—	1	6	—	—	1	2	—	—	—	—	—	—	—	10	2	1	1	—	6	—	—	—	—	1	—	—	6	3	—
Kfar Sava	22	22	—	2	9	—	—	—	—	2	—	—	—	—	—	—	13	2	3	1	4	3	5	1	—	—	—	—	—	3	—	4
Ness Tsiona	28	28	—	3	17	—	—	—	1	—	—	—	—	—	—	—	21	—	—	3	10	8	—	3	—	—	—	—	—	8	—	10
Rehovot	14	14	—	2	8	—	—	—	—	3	—	—	—	—	1	—	14	—	—	—	5	9	—	—	—	—	—	—	—	9	—	5
Hadera	9	9	—	1	5	—	—	—	—	1	—	—	—	—	—	—	7	1	1	1	3	1	2	1	—	—	—	—	—	1	—	3
Affula	6	6	—	—	2	—	—	—	—	—	—	—	—	—	—	—	2	1	—	1	—	—	1	—	—	—	—	—	—	—	1	—
Nahalal	11	11	—	—	7	—	—	—	—	—	—	—	—	—	—	—	7	2	—	1	1	3	2	1	—	—	—	—	—	3	—	1
TOTAL	1728	1690	1	215	1028	2	2	22	61	46	2	1	7	11	42	22	1462	76	32	116	537	701	88	99	—	—	7	14	—	701	16	537

TABLE V.

CONTROL OF RABIES.

DESTRUCTION OF DOGS, CATS AND JACKALS.

1st January to 31st December, 1932.

Sub-District.	Municipal and Local Council Areas.		Rural Areas.			Total
	Dogs	Cats	Dogs	Cats	Jackals	
Jerusalem	1511	185	1127	25	1	2849
Ramallah	53	—	558	—	—	611
Hebron	116	—	999	79	14	1208
Bethlehem	4	—	190	—	—	194
Jericho	—	—	207	—	—	207
Jaffa	1583	2002	2299	4	155	6043
Ramle	479	—	285	83	—	847
Gaza	842	—	1727	12	10	2591
Beersheba	—	—	135	—	—	135
Nablus	227	1	1267	34	—	1529
Tulkarm	56	46	1115	—	—	1217
Jenin	274	2	1690	47	—	2013
Haifa	720	47	677	5	—	1449
Acre	86	—	1426	32	—	1544
Nazareth	644	122	1120	176	—	2062
Baisan	403	1	1104	15	1	1524
Tiberias	441	6	1136	163	6	1752
Safad	274	58	1325	1	—	1658

SUMMARY:—			
	Dogs	—	26,100
	Cats	—	3,146
	Jackals	—	187
	TOTAL		29,433

B. ENTOMOLOGICAL DIVISION.

1. Routine Duties.

The abolition of the post of medical entomologist on grounds of economy resulted in a cessation of practically all but purely routine work in this division.

The identification and classification of insects submitted by departmental inspectors and by the personnel of private firms operating in midge-infested areas were, however, undertaken. One finding in December proved of interest, if not of medical importance. Specimens of flies were forwarded to the laboratory from Kallia on the shores of the Dead Sea. As it was a species of *Culicoides*, with which the staff was unfamiliar, it was sent to London where it was described by Dr. J. W. S. Macfie as a new species and given the name of *C. judaeae*.

Routine identification of anopheline mosquitoes, of sand flies and of fleas parasitic on the rats caught at the ports of Jaffa and Haifa was carried out by the ordinary laboratory officers. Specimens of *A. sergenti, A. superpictus, A. bifurcatus, A. elutus, A. algeriensis, A. hyrcanus, A. multicolor,* and *A. pharoensis* were dealt with as well as *Phlebotomus papatasii.*

With regard to the rat fleas for which a key was prepared in 1931, the following were identified :- *Xenopsylla cheopis, Ceratophyllus fasciatus, Leptopsylla segnis, Ctenocephalus* and *Pulex irritans.*

The fleas on 1201 rats — 744 *R. norvegicus* and 457 *R. rattus* — were examined and numbered 9269. Identification was possible in 7754 cases — 5821 on *R. norvegicus* and 1933 on *R. rattus*. The principal findings follow :

FLEAS PRESENT ON PORT RATS.

Fleas on R. norvegicus.		Fleas on R. rattus		Total
Species	Number	Species	Number	
X. cheopis	5300	X. cheopis	1607	6907
C. fasciatus	89	C. fasciatus	20	109
Leptopsylla	254	Leptopsylla	296	550
Ctenocephalus	178	Ctenocephalus	10	188

2. Special Investigations.

Enquiry into the outbreak of oriental sore in a township near Jerusalem involved an examination of the phlebotomus infesting the area.

C. CHEMICAL DIVISION.

1. Summary of Work Done.

A total of 9925 samples was examined as compared with 8550 in 1931.

This increase is distributed mainly between edible fats, agricultural samples and chemico-legal specimens.

Several investigations started for the Department of Agriculture will be continued in the coming year, as will also an investigation on the corrosion of aluminium alloys. Much advisory work was undertaken especially for the Department of Customs, Excise and Trade and the Registrar of Patents and Designs and in connection with the drafting of a food ordinance and the administration of the wieghts and measures ordinance. Such work occupies considerable time with but little to show for it in a report of this nature.

The departments making most use of the chemical service are Public Health, Police, Customs, Excise and Trade, Agriculture and Development.

2. Notes on Various Branches of the Work Undertaken.

(a) Public Health and Medicine.

(1) Milk.

Of the 4188 samples examined in the 14 sub-districts equipped for the purpose, 253 were below standard; that is 6% as compared with 4.3% last year.

The samples of milk of known origin collected in connection with the tuberculosis enquiry are also being examined for fat and total solids.

(2) Edible Fats and Oils.

Of the 1335 samples examined under this heading 907 were taken in Customs. Adulterated butter and semneh and also margarine and artificial semneh, which contain more than 10% of butter fat, were in August 1932 added to the list of prohibited imports. An intensive sampling in Customs was carried out during the last quarter of the year and with the exception of some samples from Syria which contained excess water no adulterated butter was found. Boric acid was present in many consignments but at present this is not specifically prohibited.

Of the 694 samples of imported semneh 34 were adulterated.

There is a large trade in imported butter and semneh substitutes, many of which resemble the genuine article and are therefore classified as margarine or artifical semneh which should contain not more then 10% of butter fat. None of the samples examined contained more than this percentage and in fact the great majority is free from butter fat.

Of the samples taken from factories and retailers 6 out of 77 samples of butter and 22 out of 131 samples of semneh were adulterated.

The use of vegetable oils of foreign origin as adulterants of or substitutes for indigenous oils mentioned in last year's report came up for consideration by the standing commitee of commerce and industry, who referred it back to this department. Sampling of sesame oil has shown that much of that sold as such is in reality not sesame oil. Of 104 samples of sesame oil examined 25 were adulterated. It would appear that the substitutes are imported oils such as soya bean, and also sunflower and areca nut oils crushed locally from imported seeds and nuts. Several samples of olive oil examined recently have shown similar admixtures.

(3) **Government Contracts.**

In connection with tenders for hospital supplies 72 samples of foods, 5 of soap and one of washing soda were examined. Analysis of soap in two cases of complaint regarding the quality of the contractors' deliveries showed that there was excess of water in one while the other was up to the standard of the accepted sample.

(4) **Other Food Stuffs.**

The 177 samples examined under this heading included cheese, flour, coffee, cocoa, custard powder, lebban, vinegar and food colours. Roasted acorns were found in coffee and enquiries indicated that there is a demand for such a mixture.

(5) **Drinking Water.**

The analysis of 168 samples under this heading includes an investigation of the Ras el Ain springs, the proposed supply for Jerusalem. These springs, which form a seepage area, are the source of the river Auja, the main stream of which has a salinity represented by a chlorine figure of 21 and a total hardness of about 35 parts per 100,000. Investigation with a portable testing outfit showed, however, that the chlorine content of the spring heads varied progressively from 11 in the north-east to 21 in the south-west, the hardness being more or less constant. Experimental borings in the N. E. have confirmed the lower salinity of the water from that area.

(6) **Drugs.**

Under this heading 45 samples of drugs and pharmaceutical preparations were examined some of which are classed as chemico-legal specimens in table A as they represent seizures under the Dangerous Drugs Ordinance. The only positive findings amongst those submitted under the ordinance were cocaine 1, and hashish 2. Unless mixed with other substances hashish is generally identified by the police without a laboratory examination.

(7) **Bio-chemical Specimens.**

These numbered 399 of which 191 were submitted by practitioners and private hospitals. Arrangements have now been made for the submission of specimens from Government and Municipal Hospitals outside Jerusalem in cases were no local facilities for laboratory examination are available.

(b) **Department of Police.**

The number of specimens submitted was 575.

(1) **Poisoning.**

Many of these specimens could have been classified under (a) above, as they were examined at the request of a medical officer or coroner. As, however, the police are also concerned with the majority, they are, for convenience, all included hereunder.

The total number of specimens submitted numbered 81, of which 22 were submitted in connection with 12 deaths where poisoning was suspected. The positive findings were hemlock (Conium maculatum) 1, morphine 1, carbon monoxide 3. The 3 cases of carbon monoxide poisoning occurred in a new well bore 65 metres deep by $1^1/_2$ metres wide. At 2 p.m on the previous day blasting had been carried out in the well with a mixture of potassium chlorate and sugar. At 6 a.m. on the following day a workman descended by a ladder but after 2 or 3 minutes he complained of a feeling of suffocation and was raised in a basket on a rope; when still about 50 metres from the surface, however, he fell out of the basket and (as was found later) fractured his skull. Half an hour later a second man went down and tied the first man to a rope but became unconscious before he could tie himself to a second rope sent down to his aid. 45 minutes later a third man descended and met with the same fate having apparently untied himself from the rope attached to him before he descended. A fourth man who went down at 11 a. m. felt no ill effects.

Specimens of blood from these three cases have given good positive reactions for carbon monoxide with tannic acid, caustic soda, and potassium ferrocyanide (*Lucas*, Forensic Chemistry andl Scientific Criminal Investigation). Though the blood appeared to be of an abnormally red colour, dilutions of 1 part in 100 parts water did not show a striking difference in comparison with normal blood. Dilutions of 1 in 500 showed the difference in colour to better advantage but this was still not very convincing. Judged by the reactions the blood of the first man contained less of the gas than that of the others. The medical opinion was that death was due in this case to hemorrhage into the brain and thoracic cavity due directly to the fall and indirectly to the carbon monoxide.

Amongst specimens connected with non-fatal cases or with allegations 6 contained arsenic and one thallium sulphate. The latter was found in bread in which crushed "Zelio grains" had been incorporated with the flour. "Zelio" is a poisoned wheat imported for destroying field mice; it is coloured red and red fragments were quite visible in the bread.

(2) **Shooting.**

The 250 exhibits under this heading represent 26 separate shooting cases in which rifles, shot-guns and pistols were involved. The large number of exhibits and controls examined has demonstrated the variety of impressions on cartridge cases which can be obtained with the same gun. This has been specially so in the case of shot-guns and small pistols. If the same make of cartridges with the same loadings as those of the exhibits are used as controls, the chances of getting comparable impressions are much greater but even then the absence of distinctive marks on an exhibit may not in itself be proof that the gun in question was not the one concerned. In one shot-gun examined the shape of one of the firing pins was altered by riding over the extractor every time the breech was opened and therefore the pin impression was quite misleading. Another factor which has had to be allowed for in some cases has been a bulging of the bottom of the pin impression by the force of the explosion. Variations in the shape of percussion caps even in the same make of cartridge have influenced considerably the impressions left by the breech-block or bolt-head. In 20 of these shooting cases the laboratory findings provided definite evidence either for or against the accused or suspected persons.

(3) **Other Crimes.**

Exhibits numbering 40 have been examined in connection with arson, agrarian crimes, counterfeiting, forgery, burglary and, in one case necrophilia.

(c) **Customs, Excise and Trade.**

Excluding 904 samples of edible fats taken in customs which have been dealt with under (a) above, there remain 2398 samples examined for the purpose of assessment of import or excise duty of which alcoholic liquors and acid oils are the most numerous.

The Government Analyst gave technical advice on 6 applications for patents, which in some cases necessitated the analysis of samples.

(d) **Agriculture and Development Departments.**

At the close of 1931 the soil survey was abandoned and the analytical service of the Department of Agriculture and Forests together with the post of agricultural chemist were abolished.

Additional staff and accommodation for the laboratory service having been approved, arrangements were completed on February 1st, 1932 for the analysis of agricultural samples as an additional branch of the chemical division of the Central Laboratories.

It was made clear to those concerned that the utility of this service for the agricultural needs of the country would be limited by the fact that laboratory officers would not be available for field work and that therefore all the sampling and most of the interpretation of results in relation to problems in the field would be left to the technical officers of the departments submitting the samples.

It was anticipated, however, that in spite of the abandonment of the soil survey the number of samples for laboratory examination would increase rather than diminish, and this has actually been the case. Last year 170 samples were dealt with (involving 796 determinations) as compared with 345 samples (2,588 determinations) in 1932. (See Table C.)

This increase is due mainly to the water survey of the Development Department and to work in connection with the following investigations.

(a) The relation between the keeping properties of oranges, methods of cultivation, etc., and composition of juice.

(b) The composition of poultry foods in local use as a basis for feeding experiments.

(c) The composition of local honey as a basis of grading for export.

(d) The relation between chlorosis and composition of soil and foliage.

(e) Methods of bleaching almonds.

(f) The preparation of poison bait for field mice.

(g) The composition of olives in relation to cultivation (started in 1931).

Further reference to (e) and (f) will be found under "Special Investigation".

Work for the Development Department was concerned mainly with irrigation in connection with which 65 samples of water were examined.

Table C. includes also soils and water submitted by the Geological Adviser for whom also 14 samples of minerals were examined.

(e) **Other Departments.**

The Palestine railways submitted 23 samples which included water, lime for softening and insecticide. Ten samples were examined for Public Works Department, 17 for the Department of Antiquities and 39 for the Trans-Jordan Government.

(f) **Private Sources.**

Excluding the 191 biological specimens dealt with under (a), 59 samples were received from unofficial sources; these include 15 samples of potassium chloride for Palestine Potash, Ltd., and 3 samples of disinfectants for a firm of advocates in connection with infringement of a trade mark.

3. Special Investigations

(a) **Corrosion of Aluminium Alloys by Palestine Waters.**

Following upon the investigation regarding the internal corrosion of radiator heads on motor vehicles working in Palestine mentioned in the 1931 report, arrangements are being made for corrosion tests on samples of various alloys submitted through the Crown Agents. This work will, it is anticipated, be put in hand early next year and will be carried on for several months.

(b) **Bleaching of Almonds.**

The export value of local almonds is enhanced if the shells have a pale colour. Hitherto the custom has been to bleach the almonds in the fumes of burning sulphur but the results have been uncertain and irregular.

Small scale experiments showed that immersion for ten minutes in a freshly-prepared solution containing 0.5 sulphurous acid gave satisfactory results. The sulphurous acid was prepared by passing sulphur dioxide into water. Horticultural officers were given the necessary instructions and reports on the results obtained are awaited.

(c) **Poison for Field Mice.**

Following upon laboratory experiments 10 kilos of wheat treated with thallium sulphate were supplied for field trial in a mouse-infested area and the Chief Agricultural Officer has reported very satisfactory results.

The wheat is soaked for 24 hours in a $4^0/_0$ solution of thallium sulphate to which a suitable dye is added to give the grain a distinctive colour.

As the wheat soaks, upon the average, half its own weight of solution, the treated grain when dried contains about $2^0/_0$ of thallium sulphate. It was found that 2 or 3 of the treated wheat grains are fatal to a mouse which dies as a rule in three days. Those concerned with the distribution of such poison (whether imported or locally prepared) have been advised as to its poisonous effects to man not only by consumption but through contact with the skin.

(d) **Counterfeit Coins.**

Arrangements are being made for the examination of some 600 counterfeit coins with a view to finding any evidence of common origin. This will be completed early next year.

4. Weights and Measures.

Government has decided that the metric system shall not yet be made compulsory. The ordinance, therefore, applies only to such metric weights and measures as are in use.

A scheme for the application of the ordinance in its present limited scope has been proposed and an indent has gone forward for the necessary equipment.

TABLE A.

SAMPLES EXAMINED DURING 1932.

Material	January	February	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	Total
Milks	374	417	499	308	357	327	370	381	297	311	251	296	4188
Butters, Edible Fats and Oils	133	38	57	86	76	97	76	134	133	131	152	222	1335
Other Food Products and Ingredients	30	33	17	14	15	90	28	10	56	37	61	18	409
Alcoholic Liquors and Ingredients	21	48	37	36	33	4	24	13	55	64	108	215	658
Non-alcoholic Beverages	—	—	5	—	35	16	10	4	2	3	2	—	77
Waters	22	16	18	20	26	24	34	42	35	23	21	25	306
Drugs and Disinfectants	—	1	3	1	3	—	9	4	1	4	3	6	35
Medico-legal and Chemico-legal	10	11	11	28	17	43	52	141	38	16	194	14	575
Inedible Commercial Products	140	85	87	95	116	58	126	266	169	192	217	230	1781
Soils, Fertilizers and Feeding Stuffs.	15	16	10	—	10	15	1	16	6	11	7	27	134
Geological Specimens and Antiquities	—	1	3	7	—	—	6	1	1	7	—	2	28
Bio-chemical Specimens	29	27	16	33	37	50	30	31	27	38	32	49	399
TOTAL	774	693	763	628	725	724	766	1043	820	837	1048	1104	9925

TABLE B.

MILK ANALYSIS IN THE CENTRAL LABORATORIES AND DISTRICTS—1932.

District	Number of Samples	Number of Prosecutions
Jerusalem		
Hospital Supplies	246	29
Street Vendors	124	
Jaffa		
Hospital Supplies	84	4
Street Vendors	293	
Ramleh		
Hospital Supplies	21	1
Street Vendors	186	
Gaza		
Hospital Supplies	42	—
Street Vendors	170	
Tulkarem		
Kadoorie Agricultural School	184	1
Street Vendors	78	
Haifa		
Hospital Supplies	85	105
Street Vendors	900	
Acre		
Hospital Supplies	258	1
Street Vendors	104	
Nablus		
Hospital Supplies	29	39
Street Vendors	255	
Tiberias	239	55
Hebron	32	—
Bethlehem		
Hospital Supplies	94	12
Street Vendors	202	
Ramallah	191	5
Beersheba		
Hospital Supplies	93	—
Street Vendors	86	
Safad	192	1
TOTAL	4188	253

TABLE C.

CHEMICAL SERVICE FOR AGRICULTURE.

Source.

Nature of Sample	Dept. of Agriculture	Dept. of Development	Other Sources	Total Samples	Determinations
Soil	53	15	17	85	789
Fertilizers	5	—	20	25	96
Water	9	65	4	78	495
Honey	85	—	—	85	656
Oranges	9	—	—	9	144
Olives	26	—	—	26	156
Almonds	12	—	—	12	8
Poultry foods	7	—	—	7	77
Foliage	—	8	—	8	112
Miscellaneous	1	—	9	10	55
TOTALS	207	88	50	345	2588

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